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Archives of Dermatology and Syphilology

VOLUME 13 JUNE, 1926 NUMBER 6

ROBERT WILLAN *

JOHN E. LANE, M.D.
NEW HAVEN, CONN.

'Tis opportune to look back upon old times, and contemplate our forefathers.—*Sir Thomas Browne.*

"It is the physicians's fate soon to be lost to memory. Some of his work, and with it his name, may remain, but the memory of the man himself is soon lost." It would be difficult to find a more fitting illustration of Pusey's statement than Robert Willan. To many physicians even his name is unknown. Dermatologists and historians of medicine know his name and that of his book "On Cutaneous Diseases." They know that while "the classification of diseases of the skin has been a favorite occupation of dermatologists for a century or more," Willan's classification "was used by the bulk of English practitioners" [37] for half

* Read in abstract at the Forty-Ninth Anniversary meeting of the American Dermatological Association, Philadelphia, May 27-29, 1926.

* About ten years ago, having learned to my surprise that there was little available information about Willan, and that many of his writings were not easily accessible, I started to collect what information I could about him. It was not long before I found that the search could not be successfully prosecuted in this country, and in the latter part of 1919, I wrote Dr. R. Hingston Fox of London, the author of "Dr. John Fothergill and His Friends," asking him if he could not make a study of Willan. He replied that he would do it, as he was interested and was "collecting information about all Friend Medical writers." I then sent him what notes I had collected. Dr. Fox died in 1924 before he had found time to undertake the task, and I then decided to collect what further information I could and to publish it, in the hope that some one close to possible sources might be interested in continuing the search, and that my preliminary notes might be of assistance.

During the past few years I have imposed on acquaintances and strangers to assist me in my searches. I am pleased to express my indebtedness to Lieut. Col. F. H. Garrison for searching for a portrait of Willan in the Surgeon General's Library; to Sir Norman Walker for searching at the University and at the Royal College of Physicians of Edinburgh; to Mr. H. M. Barlow, Secretary of the Royal College of Physicians of London, for searching at the Royal College of Physicians, the British Museum, the Royal Society, and the Society of Antiquaries. Unfortunately, no portrait was found. I am also indebted to Mr. Barlow for other investigations which must have consumed much time. I am also indebted in various ways to Dr. J. F. Rogers of Washington, Dr. George Blumer of New Haven, and to Miss Emily H. Hall of the Yale University Library.

of that time. They call him the "founder of English dermatology," [37] "the founder of modern dermatology" [55] and "the most celebrated of the dermatologists." [36]

It is not easy to acquire a more intimate acquaintance with Willan, as practically all of the few personal details that have been published about him are contained in Bateman's [32] "Biographical Memoir." * As was his life, so is his fate a striking contrast to that of his vivacious, brilliant and spectacular contemporary, Alibert, the "founder of dermatology in France." Alibert occupied a prominent position in the Paris medical world. By a decree of the Council of Administration of the Hospitals, of Nov. 27, 1801, the St. Louis Hospital was declared a dermatologic hospital, and in the following year, Alibert's connection with it began. Here he was heard with enthusiasm and without opposition until his pupil Biett began to expound Willan's teachings, with which he had become familiar in a visit to England after Willan's death. Alibert has been the subject of many articles and some books. One of the wards of the St. Louis Hospital bears his name, as does one of the streets by which it is surrounded.

Willan was connected with no established hospital, and while "the Public Dispensary is still in existence, yet few know of it as the home of modern dermatology under the able superintendence of the father of that branch of Medicine, Robert Willan." [47a] The dispensary is now in Drury Lane, and the original building in Cary Street has been pulled down.[43] Willan's name has been given to (it is unfortunate that it cannot be said, perpetuated by) two dermatologic societies. The Willan Society of London, which was founded on Nov. 22, 1883, consisted of the members of the staff of St. John's Hospital. It published one volume of Transactions.[64] The Willan Dermatological Club of St. Louis consisting of Drs. M. F. Engman, Robert Duncan, Joseph Grindon, W. A. Hardaway and W. H. Mook, is said to have "died a-borning," about 1902.[40, 48] It is to be hoped that this apparently still-born infant may still be resuscitated.

This contrast is not confined to Willan and Alibert, for our French colleagues have not allowed the personalities of their masters to be forgotten. In England the medical writings of this period "can be studied, and a judgment passed concerning their merit, but for a knowledge of the personal characteristics of the physicians, recourse must be had to the 'Gentleman's Magazine,' the 'Roll of the College,' and the 'Dictionary of National Biography.' Some few of the more eminent physicians have attained to the dignity of a complete 'Life,' but for the majority, these three sources of information just mentioned form almost our only

* Much of the information in this paper to which special references are not attached, is from this memoir.

guides to the characters of the physicians of this period."[47b] The editors of his works state that "the records of Addison's early life are so difficult of ascertainment that any account of his actual life . . . must date from the commencement of his association with Guy's Hospital."[41]

The purpose of this paper is to make available such information from contemporary sources in regard to Willan as has been collected in a time-consuming but not very successful search, to describe and to quote enough extracts from his little known or forgotten works to indicate the extent of his activities. His work as a dermatologist will not be taken up here.

SKETCH OF LIFE

Robert Willan was born on Nov. 12, 1757, at the Hill, near Sedburg, Yorkshire. He was brought up in the principles of the Society of Friends, and was educated at the grammar school of Sedburg, where Rev. Dr. Bateman cared for his classical education and Mr. Dawson his mathematical training. In the fall of 1777, he began his medical studies at Edinburgh, and after the usual three years of study, he presented his thesis (in Latin) "On Inflammation of the Liver," on June 24, 1780, and received his degree. In the fall of that year he went to London for further study, intending to leave shortly to take the practice of an elderly relative, Dr. Trotter, at Darlington.

We know some of the teachers and the courses given in London at about that time.

> As a rule, the subjects of Medicine, Materia Medica, Anatomy, and Chemistry were taught at schools and lectures supported by private enterprise, of which there were many in the metropolis at this time. In the "Medical Register" for 1783 a page is devoted to a list of lectures, and of the nineteen given there all were supported by private enterprise with the exception of those at the London, St. Thomas', and Guy's Hospitals. Indeed, it appears that Dr. George Fordyce of St. Thomas', Dr. William Saunders of Guy's, and Dr. James Maddox of the London, were the only physicians who gave systematic courses of lectures at the institutions to which they were attached. In the same manner the subject of midwifery was taught by means of private lectures given by Denman, Osborne, Orme, John Clarke, and David Davis. Prominent among these private lecturers was Dr. George Fordyce, who lectured for thirty years on Physic, Materia Medica, and Chemistry at his house in Essex Street, Strand. He was assiduous and unremitting in his work; beginning at seven in the morning, he delivered three lectures, each lasting an hour, on six days in the week, and probably nearly all the students coming to London at this period passed through his hands. The teaching of Anatomy was carried on chiefly at the school in Windmill Street, where the brilliant abilities of the two Hunters, Hewson, Cruikshank, Baillie, and Wilson made it deservedly famous. Mr. John Shelden, Dr. R. Maclaurin, and Mr. Blizzard also taught Anatomy at their respective houses with considerable success.[47c]

We do not know what lectures Willan attended, but we do know that he met Dr. John Fothergill, who urged him to settle in London,

and promised to help him. Dr. Fothergill died in December and Dr. Trotter shortly after, and Willan went to Darlington early in 1781 to take up the practice left by Dr. Trotter. While there he made a study of the sulphur waters at Croft.[2] Feeling that the practice at Darlington was not worth struggling for, he moved to London early in 1782, where he "experienced much active friendship" [32] from Dr. Fothergill's sister, "a wise, kindly and hospitable old lady, and a woman of unflinching truth and candour," [49a] who survived her brother for twenty years.

At this time hospital positions were practically closed to those who had not been pupils of London hospitals and of English medical schools, and the movement of starting new hospitals began.

> In this difficulty the more enterprising spirits threw themselves with ardour into the project, and so it came to pass that the new hospitals and dispensaries were staffed by some of the ablest and most enlightened physicians in the country. The names of Fothergill, Lettsom, James Sims, Hulme, Johnston, Simmons, Wells, and Willan are prominently connected with this movement, and some of the dispensaries in London, such as the "General" (1770), the "Westminster" (1774), and the "Public," soon became centres for teaching, and the excellence of the clinical instruction attracted many students."[47d]

In 1783, the Public Dispensary in Carey Street was opened, and through the efforts of friends, Willan was appointed its physician; John Pearson, its surgeon. From this time on his "advance to public reputation . . . was regularly progressive, though slow." Shortly after his arrival in London he became a member of the Society for Promoting Medical Knowledge, which was the only medical society to which he ever belonged. The meetings of this society were held at a Coffee-house in Cecil Street. He was admitted a licentiate of the Royal College of Physicians, March 21, 1785.[37] He presented a plan for the arrangement and description of cutaneous diseases to the Medical Society of London, for which he received the Fothergillian Gold Medal for the year 1790. It is of interest to note that this medal was awarded only six times and that a few years later Jenner received it.[19a, 49b, 53, 59] In 1791, he was elected a Fellow of the Royal Society of Antiquaries. In 1802, he was appointed one of the physicians extraordinary to the newly established Fever Institution.[32] He was also connected with the Finsbury Dispensary from which he resigned in 1799(?); and to lessen his work at the Public Dispensary, his friend and pupil, Dr. T. A. Murray, in 1800, was appointed his colleague at that institution. His increasing practice led Willan to resign his position there in December, 1803, after a service of about twenty-one years. The governors of the Dispensary on his retirement made him consulting physician, and a Governor for life "and presented him with a piece of plate . . . inscribed with a testimonial of their attachment and respect." He was elected a Fellow of the Royal Society on Feb. 23, 1809.[37]

In the winter of 1810, his health began to fail and some months later he started for Madeira on advice of his friends. He died there on April 7, 1812.

SCHOLAR AND HISTORIAN

Willan was a man of wide interests and scholarship, though the statement of a friend, just after his death, that "he possessed almost every intellectual attainment that can be comprised within the finite compass of the human mind" [33] must be an overstatement of the facts. At school he "was early distinguished by his studious disposition and the rapidity of his attainments." [32] He was a good student of mathematics, and "was deemed to excel his master in his critical knowledge of Greek." [33] During his year's practice at Darlington, in addition to the pamphlet on the "Sulphur Waters at Croft," he compiled "The History of the Ministry of Jesus Christ," which was a combination of the narratives of the four evangelists, and accompanied it with scholarly notes.[5]

The examination for the license of the Royal College of Physicians was in this day a searching one: "It not only established the fact that a successful candidate was learned in the principles of Medicine, but it proved also that he was a man of considerable erudition and culture." [47g] Even so, at the close of the examination which was conducted in Latin, it is likely that the censors were mildly surprised to be addressed by the candidate with "some congratulatory Greek verses." Willan never gave up his classical studies, and in the early years of his practice he made a study of the manners of primitive Greece from the Odyssey, which was never published. He recorded his cases carefully "mostly in a neat Latin style, in which he wrote with great fluency." In preparing his classification of skin diseases he spent much time "investigating the original acceptation of the Greek, Roman, and Arabian terms applied to eruptive diseases."

Willan made a number of antiquarian studies and read some of them before the Society of Antiquaries, but did not allow them to be published. One of these was an elaborate essay on "Lustration by Needfire" [60] which has not been published. Another, "A List of the Ancient Words at present used in the Mountainous District of the West Riding of Yorkshire" was published by the Society after his death and has been reprinted. This list contains many local medical terms. Willan was not a professional antiquary nor philologist. His refusal to permit the publication of these studies was probably because he could not speak with sufficient authority on subjects which had been undertaken simply as a recreation. Of the published list, Mr. C. C. Robinson remarks:

> There is a certain want of character about this Glossary. Orthographical peculiarities are not made apparent, and one knows no more about the dialect-*speech* after looking through the Glossary than before. . . . The notes on

folklore show a want of familiarity with the home life of the peasantry, and one is inclined to smile at some of the pompous inferences indulged in. However, it is a good old-fashioned word-list, and requires little weeding.[27a]

Willan, in a comment on the rustic ball called "Merry Night," is lenient toward some rustic practices which have been condemned by other writers.

. . . strong ale, and strong punch, besides kissing and romping, "with gallantry robust," form an indispensable part of the entertainment. . . . Each rustic nymph is finally conducted by her partner of the dance to her father's house, into which both enter without noise, and seated on the antique *lang-settle*, prolong conversation in gentle whispers, till the first streaks of dawn admonish the youth to retire. Should a moralist of the south feel inclined to censure the freedom of the northern maidens, let him remember the enormities committed at masquerades, balls, and assemblies, in our refined metropolis, where women of character and distinction often place themselves in contact with dissolute females, or expose themselves to be improperly addressed by the most profligate of the other sex. The daughters of yeomen admit not into their assemblies any person of a doubtful reputation; with them the excitements of the Merry-night lead not to criminality, but terminate in honourable marriage. A lapse from chastity on these occasions scarcely occurs in a series of years; but if, in unguarded moments, a youthful pair shall yield to temptation, the seducer's conscience generally induces him to anticipate the open shame or utter distress of the frail damsel, and to make the only effectual reparation.[29a]

Willan's chief historical work was published after his death and edited by Ashby Smith; here he speaks with authority. It is an inquiry into the "Antiquity of the Small-Pox, Measles and Scarlet Fever." The first and second chapters were revised by Willan in his last illness. On very few medical subjects has so much been written as on smallpox. As long ago as 1750, it was said that at least a thousand authors had done so. With the exception of syphilis, there is no disease about whose antiquity there has been more dispute. The partisans of the modern origin of smallpox contended that its first appearance was in Arabia at the close of the sixth century.[29k] In this study Willan's classical scholarship was tested, and of his thoroughness Ashby Smith says:

It will be seen, that in conducting this inquiry, Dr. Willan has not rested satisfied with consulting the ordinary sources of information on such subjects;-the writings of medical authors;—but that he has also taken a comprehensive view of the works of the historians, the poets, and the ecclesiastical writers of antiquity. From these authorities combined, he has accumulated a mass of probable evidence, (for were demonstrative proofs possible to be obtained, no room for such an investigation could have existed), tends unanswerably and irresistibly to establish his position, that the Small-pox, Measles, and Scarlet Fever, have prevailed in almost every age of the world, of which history or tradition has furnished us with any records.[29l]

Haeser says that Willan's work was "epoch making in this strife" over the origin of smallpox, and "the most comprehensive work that

had been published up to that time," and "the most brilliant justification" of Hahn's assertions of the antiquity of the disease.[50]

At the time of his last sickness, Willan was collecting materials for a history of syphilis "of the existence of which he was inclined to think that the records of medicine furnish satisfactory evidence." [29m] Other historical studies had occupied his leisure for some years before his death, and he left many notes on the history of epidemic or endemic ignis sacer and on the history of leprosy in the Middle Ages.

CLINICIAN

Bloch says of Willan's book "On Cutaneous Diseases" that it had the greatest recognition in all European countries—such as no other treatise on the subject before or since has received.[57] While his work as a pioneer in this field has obscured his other work, he was a "most accomplished clinician" in general medicine. The Public Dispensary drew its patients chiefly from the poor in "the vicinity of Clare-market, Drury-lane, Chancery-lane, Temple-bar, Strand, Holborn, Fleet Street and Market, Ludgate, Black and White Friars, etc." as well as "poor objects from any quarter, if properly recommended," and treated the greatest variety of diseases, both at the dispensary and at the homes of patients too sick to attend.[51] There was one curious exception. This dispensary, which was to become the "cradle of dermatology," had a regulation that "persons labouring under venereal complaints, are not admitted, unless their case is particularly specified in their recommendation, which is not granted to them a second time on any account whatsoever." [51] Except in England, dermatology and syphilology in modern times have been intimately associated, and it may be that this regulation had some influence in preventing their closer association in England.

About four years after the opening of the Public Dispensary, Willan started lectures there on the principles and practice of medicine. These lectures were not a success, and were soon given up as students preferred the reputation of attending lectures at the large hospitals.[32] A little later he received, as pupils at the dispensary, young physicians who had recently graduated, and made "a sort of clinical school, in which, under his direction, a large part of the young physicians who later made a reputation in this science, were trained at the bedside of the patient." [39] The failure of the lectures was, no doubt, the reason for his adoption of this method, which is now universally recognized as the best kind of clinical teaching. In this work he was eminently successful, as many of his pupils later became distinguished physicians. Bateman continued this instruction after Willan left the dispensary, and of it Chaplin says: "It is not often that teachers can claim as

pupils a Bright, an Addison, a Marcet and a Biett, but Willan and Bateman enjoyed that distinction." [47a]

Willan's clinical keenness is easily inferred from a slight acquaintance with his writings. His case reports are clear and concise, vividly describing the important points and omitting the nonessentials and verbiage. Rayer says:

> The great characteristics of Willan's writings are the impress they bear of the scientific spirit that guided him in his researches; the great precision, and the purity of his descriptions; the particular pains he takes to select well, and to use judiciously, his technical expressions; lastly, the sound judgment he displays in his interpretation of the ancients.[58]

Osler, some years ago, called attention to the fact that Willan's "graphic description of a case" of "purpura associated with violent vomiting, excruciating pains in the bowels, etc.," was the earliest report of what was later known as Henoch's purpura.[56, 19b]

Many of Willan's forgotten writings are worth reading. His description of the "Characteristics and Effects of Perfect Vaccination," and the differential diagnosis of smallpox and chickenpox are models of vividness and lucidity that can hardly be improved on. As a therapeutist, Willan was in many ways ahead of his time. In 1800, he made the statement that "all eruptive diseases are abated by bathing, consequently, then, the Smallpox." [29n] He was equally outspoken as to the importance of fresh air treatment.[29c] In drugs and supposedly specific treatments, Willan, for his time, had little faith. Bateman almost apologizes for him as a therapeutist, saying:

> As a practitioner,—he was a close and faithful observer of diseases, and by the peculiar quickness with which he detected their characteristic appearances, however obscured by complication, he had obtained a copious store of sound experience; yet it has been remarked that he did not always prescribe with that vigour and decision, which so much discriminative talent would have authorized.[32]

Willan's own statements clearly show his views on the uncertainty of therapy. In one place he says that "no absolute certainty can be obtained of the precise effects of any medical or chirurgical process." [17a] In another place he freely confesses his misplaced confidence in the then accepted treatment of chorea by bleeding and purgation, and sets a good example of frankly admitting his error of judging results too soon.

> It will therefore appear that the ancient practice in this disease must be generally injurious. A case inserted by myself in the London Medical Journal, Vol. VII,[33] may seem to contradict the above assertion; but it is just and proper now to say that I met with the fate of other hasty casewriters. Before the volume recording it was circulated, my patient had a severe relapse, and was at length cured by a very different plan.[29p]

HYGIENE, PUBLIC HEALTH

Willan's "Reports on Diseases in London" are made up of the "Bills of Mortality," lists of cases which occurred in his own practice, comments on the most prevalent diseases and on unusual cases and their management. In reading them, one is struck by the interest in and comments on hygiene and sanitation. A few years ago, Arnold Chaplin referred to his work as follows:

> During the greater part of the reign of George III such efforts as were directed towards the improvement of public health were made by private individuals, for no authority existed for this purpose. . . . Several physicians, however, made the incidence of disease in the metropolis their especial study among whom must be mentioned the names of Heberden, Reid, Willan, Blanc, and Bateman. Willan may be said to have been the first physician to make a systematic study of the health conditions of London."[*e*]

This brief statement is the only one I have discovered referring to the important part Willan took in awakening the nation to the needs of the care of the public health. As was the custom at this time, Willan devoted much attention in his reports to a consideration of the effect of the wind and weather on various diseases, especially the infectious diseases, and published in the "Meterological Journal" kept at the Royal Society. In the "Reports" he did not, however, lay all diseases to these agents. The mortality among infants in London at this time was high. One third of the children died before they reached 2 years of age, and half of them died before they reached the age of 5; and about half of the deaths in London were of persons under 10 (394,801 out of a total of 836,285 between the years of 1760 and 1799).[20*a*]

Referring to the reduction of mortality of mothers and babies at the British Lying-In Hospital (women: 1 in 42 in 1749-1758 to 1 in 913 in 1799 and 1800; babies: 1 in 15 in 1749-1758 to 1 in 115 in 1799 and 1800), Willan says:

> This shews to what extent the lives of infants may be preserved by proper attention and management. . . . The poor, who are both ill situated in London and obliged to return to work soon after delivery, find a minute attention to their offspring impossible; the devastation among infants is therefore, dreadful. . . . I can only at present mention this circumstance as a melancholy consideration, not being able to suggest any plan for removing evils of so great a magnitude.[20*a*]

Pulmonary tuberculosis also collected a terrific toll in London. About one fourth of the deaths were due to disease of the lungs, which was, as Willan remarked:

> A circumstance which surely merits some consideration. These complaints are universally, and perhaps with reason, excluded from hospitals; they require a free circulation of pure air, and admit of little relief where patients are confined to small rooms in close, narrow courts and alleys.[20*b*]

He suggests that fever hospitals and houses of recovery be used to care for these sufferers in seasons when there is little fever.

While Willan attributed much of the prevalence of these diseases to the weather, he realized that

> Coughs and consumption are produced, independently of the temperature, or of the smoky, clogged atmosphere of London, and often rendered inveterate by different employments injurious to the lungs. Thus, hairdressers, bakers, masons, bricklayers' laborers, laboratory men, coalheavers, and chimney-sweepers are liable to be affected with obstinate pulmonic diseases; as are also, in signal degree, the dressers of flax and feathers, and the workmen in the warehouses of leather sellers. Many persons, thus engaged, struggle with a constant, hard troublesome cough, until it terminates in consumption; whereas, by a timely removal into purer air, and a suitable regimen, they might soon have been restored to health.[29c]

Among other industrial diseases, he refers to lead colic and notes with approval of the improvements in the manufacture of white lead which will diminish the disease in that industry.[29d]

He lists occupations which cause diseases of the skin and plainly states that cleanliness is the prime prophylactic for many of them.

> And how are the poor, without accommodations for the purpose at home, to clear their bodies from the dirt, dust, and unctuous or adhesive substances, which their various employments fasten on them? There being no provision in any part of the metropolis for washing or bathing, they quietly suffer the penalties annexed to the want of cleanliness, as disagreeable smells, perpetual irritation with chaps and fissures on the skin, boils, and eruptions of inflamed pustules, the Itch and Prurigo, the Lepra, the dry Tetter, the running Tetter, the Dandruff and Scald-head. To plunge into the Thames is difficult and dangerous; we are therefore obliged to tolerate the disgusting and indecent plan of bathing in the New-River, to which hundreds of men and boys repair every fine day in summer, and pollute the water as it flows into our cisterns. It is not, however, this revolting idea which should stimulate us to action; the health and comforts of the poor inhabitants merit a prior consideration. Indeed all ranks of society would be greatly benefitted by the establishment of cold and tepid baths, accessible at a moderate expense; for, by a strange thoughtlessness, most men resident in London, and very many ladies, though accustomed to wash their hands and faces daily neglect washing their bodies from year to year. Hence the perspiration, condensed on the skin, gradually obstructs the exhalant pores, thereby producing various internal complaints, and an universal itching over the surface of the body, to which some delicate sufferers reconcile themselves, by supposing a scorbutic disposition communicated from their progenitors, without any fault of their own. Itching eruptions on the skin, often denominated Scurvy, or the English Malady, will never be eradicated until bathing or washing in warm water becomes general. The introduction of it, however, is not likely to be the work of physicians or philosophers alone. They must first influence the leaders of fashion. Let some of our nobility erect baths . . . in their spacious mansions, and, by, setting an example, induce others to make the practice of bathing habitual. The custom would soon be adopted in every part of the metropolis.[29e]

Willan also realized that lack of hygiene was responsible for disease among the better classes as well as among the poor. Referring to chlorosis, he said:

> Young females are often affected with it, who follow a sedentary occupation in close streets, or narrow, crowded tenements, and seldom enjoy the benefit of fresh air. The disorder is not, however, confined to this class of people. We cannot be surprised that young ladies of the highest rank should suffer equally; eight months of the year they sit on thick carpets in close rooms heated by register-stoves; have large fires kept in their bed-rooms, never stir out except in carriages, and are often too much restricted in their diet. The weakness and extreme irritability, induced by this mode of living not only brings on the chlorotic state, but after the slightest exposure to damp, or cold air, renders them also liable to be affected with pains and inflammations of the bowels, rheumatism, head-ache, catarrh, phthisis, etc., more especially as in the article of dress at that period of life, health is always sacrificed to fashion.[29f]

Willan was apparently greatly impressed with the necessity of fresh air, for in addition to his numerous remarks about it in the "Monthly Reports," he edited the "Observations on the Ventilation of Rooms" by John Whitehurst.[9]

The effects of overindulgence in spirituous liquors were appreciated. Willan was convinced that "more than one-eighth of all deaths which take place in persons above twenty years old, happen prematurely, through excess in drinking spirits."[29g] He wrote an account of these effects which was later published as a separate pamphlet with directions for treatment, under the title "Extracts from an Account of the Dreadful Effects of Dram-Drinking: with Directions for Those Who Are Desirous of Returning to Sobriety and Health."[15] Let it not be inferred from this title that Willan recognized no virtue in alcoholic beverages. His advice for temperance would be heretical to the bone drys of today.

> When a glass of spirit has been drank merely as a pastime, to fill up the pauses of work, that object might be attained in a much more innocent way by taking *snuff*, or smoking a *pipe* of tobacco, over a pint of beer: for tobacco has a no less cheering effect than spirits, while it is not in any respect detrimental.[16a]

And in breaking off the dram habit:

> The stomach must be habituated to the use of *porter;* or, in some individuals, *wine;*—both of which are usually rejected by spirit drinkers, as too cold, flat, and ascescent. By this change of liquors it is not proposed to recommend one species of excess, in lieu of another. Tho wine may be proper and useful, no man can benefit his constitution by it, who constantly takes beyond six glasses of a moderate size in 24 hours. A labourer will receive more durable support and exhilaration from *porter* than from *spirits;* but the advantages of it would be likewise entirely defeated, if a quantity were every day taken, nearly sufficient to produce a state of intoxication.[16a]

That Willan considered alcohol of use in some diseases may perhaps also be inferred from the fact that on June 24, 1803, the Institution for

the Cure and Prevention of Contagious Fever received a guinea for wine from Mrs. Willan.[63]

VACCINATION

While Willan was not active as a vaccinator, he was an interested student of the results of vaccination and an ardent supporter of Jenner, and in 1799 (?) he was one of the signers of the following public testimonial:

> Many unfounded reports having been circulated, which have a tendency to prejudice the public against the inoculation for cowpox: We the undersigned physicians and surgeons think it our duty to declare our opinion that those persons who have had the cow-pox are perfectly secure from the future infection of the small-pox. We also declare that the inoculated cow-pox is a much milder and safer disease than the inoculated small-pox.[44a]

As a demonstration of his confidence in vaccination, Willan "carried his only son, after he had been vaccinated, through the wards of the Small-pox Hospital, and examined the patients with the child in his arms." [52] He had had much experience with smallpox, as had all physicians of that day, and in the summer of 1800, he substituted for Dr. Woodville, who was absent in Paris, at the Inoculation Hospital.[29b] His history of smallpox is referred to elsewhere. His book "On Vaccine Inoculation" is almost if not quite forgotten, but it is well worth reading, and its clear and concise statements of the clinical course, the problems and the results of vaccination are not out of date today.

In the attempt to call the attention of government officials to the public health problems involved, he dedicated the work to Lord Henry Petty, Chancellor of the exchequer, and in the dedicatory epistle says:

> In the character of a statesman, my Lord, you cannot regard with indifference, a plan calculated to increase the population of the United Kingdom, by preserving, annually, the lives of more than 40,000 persons.[37b]

It is impossible to quote much from this work, but the conclusion will give its purpose.

> In appreciating the advantages of Vaccine Inoculation, our views should be directed beyond the mere expediency of substituting Vaccination in place of the inoculated Small-pox.—A general plan for extirpating the Small-pox, and for preventing its future diffusion among us, surely merits consideration much more than any palliative method of superseding this disease, or of mitigating its severity.
>
> Government has lately established a "Board of Health, to prepare and digest rules and regulations for the most speedy and effectual mode of guarding against the introduction, and spreading of infection, and for purifying any ship or house in case any contagious disorder shall manifest itself in any part of the United Kingdom, notwithstanding the precautions taken to guard against the introduction thereof: and to communicate the same to all magistrates, medical persons, and others, his Majesty's subjects, who may be desirous and may apply to be made acquainted with the same."

While we defend ourselves against the introduction of pestilential diseases from the Mediterranean, or of the yellow Fever from America, we supinely preserve among us a contagious distemper, originally exotic, which has been destructive, beyond all others, for more than a thousand years past. I have stated in another work, the various means by which contagion is communicated, and have shown how rapidly the Small-pox, Scarlet-fever, and Measles are diffused through populous towns, and how often they extend from thence to distant parts of the country. Those who attend to the particulars of the statement, will, I think, acknowledge that these contagious febrile disorders might be suppressed by municipal or parochial regulations, without much difficulty, and without any material injury to individuals.

The necessity of some general plan for extirpating the Small-pox from our Islands, and for preventing the future introduction of it, does not seem to be superseded by the new Inoculation. Dr. Jenner's discovery would, however, greatly facilitate the execution of such a plan, and would insure its ultimate success. It cannot be completed by the exertions of an individual, nor by the agency of private societies, but will require the interposition of Parliament. Many of the members of both Houses have strongly interested themselves on the subject; and Government is ready to afford the requisite assistance. These united endeavors, exerted, on the one hand, by restraining the diffusion of the natural Small-pox, and on the other, by giving every encouragement to the practice of Vaccination, will assuredly confer an inestimable benefit on the inhabitants of this Kingdom, and on those of every country upon earth.[17c]

How much better can the situation be stated today?

In a letter from Jenner to Willan, on Feb. 23, 1806, the whole matter is summed up in a few words:

. . . Time and experience now allow me to draw the following conclusion from the history of Vaccination in our own country—that wherever it has been much practised, there the Small-pox is least seen among the inhabitants, and wherever it has been universally practised, there it is not seen at all, and if brought by accident, that it does not spread. . . .[17d]

In this book Willan described the modified character of smallpox occurring in those who had been vaccinated.[44b, 17c] In an undated letter of 1809 (?) to James Moore, Jenner expressed his opinion of Willan's book by saying that: "Willan in his Treatise on Vaccination has spoken much to the purpose respecting small-pox after cow-pox; you cannot quote a better author."[44c]

Bateman later said of this book: "Although six years have elapsed since the publication of this volume, subsequent experience has added no fact of importance to the information which it contains;—another proof of the accuracy of Dr. Willan's observation."[32]

CONTAGIOUS DISEASE HOSPITAL

The infectious fevers ravaged London at this period, and Willan was active in his efforts to induce London to follow the example of Manchester, Chester and Waterford in establishing houses of recovery or fever hospitals.

The importance of this work was so great that rather long quotations are justified even at the risk of being tedious.

Early in 1800, in his Reports, Willan wrote as follows:

> The good effects of all those applications are often superseded by the miserable accommodations of the poor, with respect to bedding, and a total neglect of ventilation in their narrow, crowded dwellings. It will scarcely appear credible, though it is precisely true, that persons of the lowest class do not put clean sheets on their beds three times a year; that even where no sheets are used they never wash or scour their blankets and coverlets, nor renew them till they are no longer tenable; . . . lastly, that from three to eight individuals, of different ages, often sleep in the same bed; there being, in general, but one room, and one bed for each family. To the above circumstances may be added, that the room occupied is either a deep cellar, almost inaccessible to the light, and admitting of no change of air; or a garret, with a low roof and small windows, the passage to which is close, kept dark in order to lessen the window-tax, and filled not only with bad air, but with putrid, excremental, or other abominable effluvia from a vault at the bottom of the stair-case. . . . From all these causes combined there is necessarily produced a complication of fetor, to describe which would be as vain an attempt as for those to conceive who have always been accustomed to neat and comfortable dwellings.
>
> The above account is not exaggerated; for the truth of it I appeal to the medical practitioners, whose situation or humanity has led them to be acquainted with the wretched inhabitants of some of the streets in St. Gile's parish, of the courts and alleys adjoining to Liquorpond-Street, Hog-island, Turnhill-street, Saffron-hill, Old-street, White-Cross-street, Grub-street, Golden-lane, the two Brick-lanes, Rosemary-lane, Petticoat-lane, Lower-east Smithfield, some parts of upper Westminster, and several streets of Southwark, Rotherhite, etc. . . .
>
> But where is a remedy to be found for so many evils? Hospitals are either barred against the entrance of contagious diseases, or, if leave of entrance be obtained, it generally comes when the patient is incapable of being removed, there being but one day throughout the week in which he can be admitted, unless by some very particular interest. Pecuniary aid, whether transmitted by the warm heart of benevolence, or wrenched from the slow, reluctant hand of parochial administrators, is an insufficient palliative for the present case. Shall the unhappy patient then seek for refuge in the parish workhouse? Alas! the fever is already making its ravages there. What therefore is to be done? All these mischiefs admit of ready alleviation, and might, with proper management, be removed at a moderate expense. Let Houses of Recovery be established in open, airy situations, at some distance from other buildings, but adjoining to the different districts of the metropolis; to be supported either at the joint expense of the several parishes within each district, or by a voluntary subscription among its principal inhabitants. As soon as any person exhibits symptoms of a Fever from infection, let him be instantly removed into the House of Recovery where, being washed, and put, with clean linen, into a fresh bed, he will soon be freed from his complaints and able to rejoin his wife and family. To them in the mean time, a loan of bedding should be made till their own bed is cleansed, and till the walls and floor are washed and scoured.[294]

A year later, April 9, 1801, the following certificate was published with Willan's name among the signatures:

Having been desired to state our sentiments, on the situation of the poor, with respect to contagion, We declare that the *infectious, malignant fever* is at all times prevalent among the poor of the metropolis, in whose habitations it has a constant tendency to diffuse itself more widely,—that it often extends from them into those of the higher orders;—that it derives its origin principally from the neglect of cleanliness and ventilation;—and that its communication from the persons first attacked to the other members of a family, is an almost necessary consequence of the crowded state of the dwellings of the poor.

Altho the present season of the year is not that at which, in general, Typhus chiefly prevails, yet we know that, at this time, many persons are daily suffering from its attacks; and we are of the opinion that the evils, which result to individuals, and to the community, from this circumstance, are of such magnitude, as to render it necessary that they should be immediately remedied. We believe that, in many instances, the infection of a family, and of a neighborhood, is owing to contagion, introduced by a single person; and that it might have been prevented by his timely removal. We are therefore satisfied that the evils above mentioned would, in a great measure, be obviated by the establishment of an institution, which should have for its objects—the removal of the persons attacked by contagious fever, from situations where, if they remain, the infection of others is inevitable:—and the cleansing and purifying of the apartments, furniture and clothes, of those, in whose habitations a contagious disease has subsisted, or is likely to appear.

We conceive that the present number of patients labouring under *Typhus* and other contagious diseases in London, can only be estimated from the numerous individual communications.[62]

Active plans for the establishment of a fever hospital had been carried on, and Gray's-Inn-Road had been decided on as the location. Opposition, such as even at present is aroused when such plans are made, began, and on Nov. 17, 1801, the following report on the dangers of a contagious disease hospital was made by a medical committee. It was signed by Sir Walter Farquhar, Dr. Garthshore, Dr. Latham, Dr. Lettsom, Dr. Cooke, Dr. Willan, Dr. Stanger and Dr. Murray.

From the experience of Chester, Manchester, Waterford, and other places where houses for the reception of persons in fever have been established, we are satisfied that the number of contagious fevers has been greatly diminished, not only in towns, but in the very district and neighborhood where Houses of Recovery have been situated. From this circumstance, therefore, as well as from our own knowledge, and the statement of those who have the best means of observation; we are of the opinion, that, the proper and necessary regulations for the internal management of the House in Gray's-Inn-Road being adopted, there will be no reasonable ground of apprehension on the part of the neighboring inhabitants. On the contrary, we believe that there will be much less danger of the atmosphere in that neighborhood being infected by the proposed House of Recovery, than there now is in the populous districts of the town, from the prevalence of fever in workhouses, or in the habitations of the poor.

At the same time, we cannot help suggesting to the committee, that the present establishment will not, in itself, be adequate to the general relief of our extensive metropolis, although the measure is, in our opinion, of the utmost importance and necessity; and it is imperiously called for by the present situation of this great city; yet we conceive that it cannot be effectually carried into execution without

the assistance of the Government, in aid of private donations, and of such parochial donations as the good sense, or particular circumstances, of some parishes may induce them to supply. In a national as well as a municipal view, there is hardly any object of more consequence, or which ought, in our opinion, to be more generally the concern of all ranks of people,—of the rich as well as the poor,—than the adoption of measures for checking the progress of infectious fever; and spreading desolation through the whole town; and thereby unavoidably affecting many parts of the Kingdom at large. The preservatives against this calamity are now generally and practically known; experience has afforded the most unequivocal and satisfactory evidence in their favour; and while other places within the British Isles, with far more limited resources, have successfully adopted means of remedy and prevention against this evil, we cannot but express our confident hope that the opulent cities of London and Westminster will not be backward in imitating so wise and so benevolent an example.[62]

The opposition was unsuccessful and the house of recovery was opened on Feb. 9, 1802, and Willan was made one of its "physicians extraordinary."

The good results of the opening of this hospital and the better care of patients in the districts attended by it and by the Public Dispensary were at once apparent.

In 1800 and 1801 there was much typhus in London, and although other factors undoubtedly contributed to the result, the cases of typhus in the district served by the Public Dispensary "diminished five-sixths in 1802," [63] and in a report of the Public Dispensary published in 1814 the following note attached to it briefly gives the subsequent favorable results in the same district.

The committee remark, with peculiar satisfaction, that contagious fevers, formerly very prevalent at all seasons, have nearly ceased to exist within this district; not more than four patients in fever having applied to the dispensary during the last year. This circumstance is probably to be attributed, in a great degree, to the measures adopted by the Fever Institution (which was originally recommended by this charity) by which many of the sources and receptacles of contagion have been effectually purified.[51]

FAMILY AND PERSONALITY

Willan's father, of the same name, was a physician, practicing in Sedburg. He was a graduate of Edinburgh in 1745, and the title of his inaugural thesis was "De Qualitatibus Aëris." How many children the elder Willan had I have been unable to discover. One son, Richard Willan, Esq., older than Robert, was living at The Hill at the time of his brother's death.

That Willan married in the spring of 1801, and that "he had but one son, whom he intended for the church," [52] are the only facts that I have been able to discover about his immediate family. After settling in London, Willan lived "successively in Ely Place, Holborn, and in Red-Lion Square. . . . On his marriage he settled in Bloomsbury-Square." A few months before his death he moved to Craven Hill, but

still retained his house in Bloomsbury Square, where he saw patients when able to do so.

Willan's medical activities and intellectual interests have been dealt with. It remains to refer to the few details of his personal characteristics that have been found. "In his intercourse with his professional brethren, he was liberal and independent, and extremely tender of giving offense." [32] He was sympathetic toward physicians who had few advantages. From personal experience he knew the difficulties the country physician had to contend with and said of him: "Practitioners in the country having no resource but in their own sagacity often acquire as much professional knowledge and experience as those who seem to have better opportunities." [17f] He was jealous of the good name of the medical profession and did not fear to condemn questionable practices, as his published remarks in regard to pills of ferrous carbonate sold as a nostrum show.

> Pills made of the unwashed precipitate, combined with myrrh, have been advertised and sold as a nostrum. I am sorry to notice a circumstance so disgraceful to the medical profession, but must observe, that the above prescription was communicated, some years ago, to the vender of the pills, by a Fellow of the London College of Physicians, under whose name the medicine is, I believe, yet sold and recommended to public attention.[29j]

An interesting account of Willan's relations with James Sheridan Knowles, the playwright and actor, is given by the latter's son.

> From the Wilts Militia, he (i. e. James Sheridan Knowles, J. E. L.) was transferred to the 2nd Tower Hamlets, on the 25th of January, 1805.
>
> It was while he was in this regiment that an offer was made to him by the celebrated Dr. Willan, one of the brightest lights of his profession, and a man as good as he was great, which opened to him the most favourable prospects. Dr. Willan had realized a considerable fortune by his profession; . . . and looking forward to the time, not distant, when he must retire, he conceived the generous idea of bestowing the reversion of his practice upon some young man of talent. His choice fell upon my father, who had long been a welcome guest at his house, but who for some reason, probably the fear that it might compromise his independence, of which he was always sensitively jealous, was not in haste to accept the proffered generosity. It was not until Dr. Willan most kindly urged upon him the wisdom of throwing up his commission and becoming his pupil that he consented to do so. But at last, some time in 1806 he took leave of the Tower Hamlets, and commenced to study medicine under this distinguished preceptor.
>
> Here then, he was on the high road to the profession to which he had been destined in his early childhood, for which he had the qualification of a clear and vigorous intellect, and which he now commenced under the happiest auspices. There was to be no waiting for patients when his period of study was over. The practice was made and he had only to step into it. Dr. Willan prescribed his course of study, read with him, and took him about with him to visit his patients, and make him known to them. He did more for him even than this. He was one of the earliest, as he was one of the most powerful supporters of vaccination.

. . . He was, of course, a friend of Jenner's and as the Jennerian Society about this time contemplated the appointment of a resident vaccinator at their house in Salisbury Square, Fleet Street, the appointment, at Dr. Willan's request, was given to my father. He also obtained for him the degree of Doctor of Medicine from Aberdeen, a nominal honour which, however, was necessary for the post. And thus, in little more than a year after he resigned the meagre pay of an Ensign, he had not only in posse the succession to Dr. Willan's practice, but he had in esse two hundred pounds a year, with perquisites, a much larger income then than it is now, the upper part of a house in Salisbury Square, with coals and candles ad libitum. The duties of his office were not severe, and, had they been so, the almost miraculous effects of vaccination would have made them pleasant to him.[52]

No portrait of Willan has been found. The following account of his appearance, personality and last illness is given by Bateman:

From his childhood Dr. Willan had been of a delicate constitution; his complexion in early life being pale and feminine, and his form slender. His extremely regular and temperate mode of life, however, had procured him an uninterrupted share of moderate health, and latterly even a certain degree of corpulency of person, though without the appearance of robust strength. In the winter of 1810 some of his friends had remarked a slight shrinkage of bulk, and change in his complexion; but it was not till the following spring that symptoms of actual disease manifested themselves. Being at this time accidentally called upon to make some bodily exertion in assisting a patient, his respiration became oppressed, and he expectorated some blood. Soon afterwards he suffered two severe attacks of catarrh in immediate succession, which, as he did not desist from his professional avocations out of doors, did not readily subside, and left behind a considerable difficulty of breathing, which rendered the horizontal posture in bed insupportable, with sleeplessness, total loss of appetite, cough, hoarseness, and a very unequal and irregular state of pulse, . . . symptoms which seemed to imply an effusion of water from the cavity of the chest, and perhaps into the pericardium. The complexion now became exceedingly sallow, and the tunica conjunctiva of the eyes assumed a yellowish hue. During the months of July and August, partly in consequence of the mildness of the season, and partly of the employment of some active medicines, and of the repeated application of blisters, the cough and hoarseness were removed; but the other symptoms underwent little change, and the lower extremities became gradually, but at length severely anasarcous, from the feet upwards. A sudden unfavourable change of the weather, in September, occasioned a return of the cough and hoarseness, with some expectoration; and the probability of becoming phthisical, under the influence of an English winter, induced him to accede to the strenuous recommendation of some of his friends, and to undertake a voyage to Madeira He accordingly embarked with his family in the Thames, on the 10th of October; and, after being 53 days on shipboard, detained by foul winds in the Downs and at Portsmouth, he arrived at Madeira on the 1st of December. During this interval, a considerable hardness and tumefaction took place in the abdomen, with an effusion of water into that cavity, and he was harassed by a dysenteric attack. By perseverance in an active course of medicine, however, after his arrival at Funchall, all the symptoms were considerably alleviated; insomuch that, in the month of February, he meditated a return to the south of England in April. But this alleviation was only temporary; his disease was again aggravated; the dropsy, and its concomitant

obstruction to the functions, increased; and, with his faculties remaining entire to the last, he expired on the 7th of April 1812, in the 55th year of his age.

By the death of Dr. Willan, the profession was deprived of one of its bright ornaments, and of its zealous and able improvers; . . . the sick, of a humane, disinterested, and discerning physician; . . . and the world of an estimable and upright man. By his exterior deportment in public, indeed, he was far from rendering justice to his own character. His early education, his studious mode of life, and retiring disposition, prevented that display of his various and extensive knowledge in mixed society, which delighted the privacy of a small circle of friends, and which was dispensed with much playfulness and simplicity of manner. In all the relations of domestic life, indeed, he was an object of general esteem and attachment. The gentleness and humanity of his disposition were equally conspicuous in the exercise of his professional duties; in the patient attention with which he listened to the complaints of the sick, whom, in his fullest occupation, he never dismissed from his presence dissatisfied with the brevity of his inquiries; and in the liberality with which he imparted his assistance, yet refused the remuneration to which he was entitled, when the circumstances of the patient appeared to render it oppressive.[32]

An anonymous obituary note said of him that he was

universally benevolent, and disinterested to a rare degree; totally free, indeed, from every stain of selfishness; unalterable in his friendships toward all who were distinguished by his regard, which was no indiscriminating boon. . . . In his profession he was beloved almost beyond example; unassuming, soothing, sympathizing and attentive every way to the comfort of his patients . . . one whose practice was conducted on the durable basis of principle, not of interest . . . nobly sincere, he was peculiarly free from every species of low finesse.[34]

Willan was one of the important founders of modern medical science. In the words of Chaplin:

We owe to the physicians of the age of George III an immense debt for the excellent foundations they built, often with rough and improvised tools. . . . Men of the stamp of Hunter, Baillie, Prout, and Willan flung open the portals of medical science, through which their descendants have passed to realms of spacious and accurate knowledge.[47]

Willan shared the physicians fate. The memory of the man himself was soon lost. For the conscientious physician "The reward of a thing well done is to have done it. The fruit of a good service is the service itself." Willan earned this reward. In addition to this an unknown contemporary said of him that he "left engraven on the hearts of a chosen circle, praise far more valuable than monuments of marble." [34]

WILLAN'S WRITINGS

1. De jecinoris inflammatione tentamen inaugurale, etc. 29 pp., 8vo, Edinburgi, Balfour et Smellie, 1780.

2. Observations on the sulphur-waters at Croft near Darlington, 8vo, London, 1782.

3. Idem as: Experiments and observations on the sulphureous waters at Croft and Harrowgate, 8vo, ed. 2, London, 1786.

4. Idem: New ed., Stockton, 1815.

5. The history of the ministry of Jesus Christ, combined from the narrations of the four Evangelists, 8vo, London, 1782.

6. Idem: The Second Edition, with many additional notes and Observations, 8vo, London, 1786.

7. Idem: 12mo., Ed. 2, 1786. (This book is composed "by combining the accounts of the four Evangelists, relating every circumstance at length in their own words." Preface to ed. 2, p. iii. There were many similar works published about this time).

8. Idem: Willan, R., and M.: The United Gospel: or ministry of our Lord and Saviour Jesus Christ, combined from the narrations of the four Evangelists, Ed. 3, with notes, 8vo, London, 1803. (I have not been able to discover who the joint author, M. Willan, was.)

9. Willan edited: Whitehurst, John: Observations on the ventilation of rooms: on the construction of chimneys and on garden stoves. Principally collected from papers left by the late J. W. 4to, London, 1794. (I have been unable to consult this book. There is a copy in the British Museum.)

10. Monthly Reports of weather and diseases of the metropolis, Monthly Magazine, 1796-1800.

11. Idem: (Collected into volume and published as:) Reports on the diseases of London particularly during the years 1796-1800, London, R. Phillips, 1801.

12. Idem: Ueber die Krankheiten in London, besonders während der Jahre 1796 bis 1800. Aus dem Englischen übersetzt und mit Anmerkungen begleitet von George Wegscherder, 12mo, Hoffman, Hamburg, 1802.

13. Idem: New Ed., in Miscellaneous Works edited by Ashby Smith, 1821. Vide infra.[29]

14. Account of the effects of the intemperate use of spirituous liquors; extracted from Dr. Willan's Reports on the diseases in London, in: Reports of the Society for Bettering the Condition and Increasing the Comforts of the Poor, London, Appendix no. V, **3**:291, 1802.

15. Idem: (Published as a tract with addition of directions for management of the sufferers under title of): Society for Bettering the Condition of the Poor. Extract from an account of the dreadful effects of dram-drinking; with directions for those who are desirous of returning to sobriety and health, 8vo, 14 pp., London, 1803.

16. Idem: (The tract republished in): Reports of the Society of Bettering the Condition and increasing the Comforts of the Poor, London, 1805, **4**, Appendix no. II, p. 20 (Dated Jan. 11, 1803.)

(*a*) Ibid., p. 24.

17. On vaccine inoculation, 4to, iv, 108 pp., 2 pl., London, Richard Phillips, 1806.

(*a*) Ibid., p. 20.

(*b*) Ibid., Preface, p. iii.

(*c*) Ibid., p. 104.

(*d*) Ibid., Appendix, no. 1, p. i.

(*e*) Ibid., p. 50.

(*f*) Ibid., p. 48.

18. Idem: Ueber die Kuhpockenimpfung. Aus dem Englischen übersetzt, mit einer Zugabe, welche historich-kritische Bemerkungen und die neuesten Verhandlungen über die Vaccination in England enthält, von D. G. F. Mühry, 4to, Göttingen, 1808.

19. On Cutaneous Diseases, Vol. I, xiv, 15-556 pp., 33 Pl., 4to, London, J. Johnson, 1808. (No other volume was published. This work appeared in parts from 1798-1808, entitled, Description and Treatment of Cutaneous Diseases.)

(*a*) Ibid., p. ix.

(*b*) Ibid., p. 457-459.

20. Idem: 420 pp., 8vo, Kimber and Conrad, Philadelphia, 1809.

21. Idem: Die Hautkrankheiten und ihre Behandlung systematisch beschrieben. Aus dem Englischen übersetzt, und mit einigen Anmerkungen, und einem Anhange begleitet von Friedreich Gotthelf Friese. 3 vol. in 1, paged consecutively; x, 302 pp., 24 pl., 4to, Breslau, J. F. Korn, 1799-1806.

Several miscellaneous articles were collected by Ashby Smith and included in the Miscellaneous Works. Vide infra.[29] The two following ones are not reprinted there.

22. Extract of a letter from Dr. Robert Willan, physician in London, to Dr. Simmons, Lond. Med. Jour. **4**:421, 1784. (Contains some results of examination of a sample of water from Aix-la-Chapelle.)

23. Case of Chorea Sancti Viti cured by Cuprum Ammoniacum, Lon. Med. Jour. **7**, 187, 1786.

Willan's classification was reprinted in various places as:

24. Cullen, W. A.: A synopsis of nosology to which is added Willan's classification of cutaneous diseases, Philadelphia, 1816.

25. Schriver, C. W. A.: Diagnostiche Tabelle der Hautkrankheiten, Broadside folio, Berlin, 1836.

POSTHUMOUS PUBLICATIONS

26. A list of the ancient words at present used in the mountainous district of the West Riding of Yorkshire. (Read June 27, 1811), Archaelogia or Miscellaneous Tracts relating to Antiquity. Published by the Society of Antiquaries of London, **17**, 138, 1814.

(*a*) Ibid., p. 152.

27. Idem: (Reprinted, with introductory note by W. W. Skeat): English Dialect Society, Vol. II, Series B, Reprinted Glossaries, 76, 1873.

(*a*) Ibid., Introduction to Part I, p. v.

28. A practical treatise on porrigo, or scalled head and on impetigo, the humid or running tetter. Edited by Ashby Smith, viii, 48 pp., 5 pl., London, E. Cox and Son, 1814.

29. Miscellaneous works of the late Robert Willan, M.D., F.R.S., F.A.S. Comprising an inquiry into the antiquity of the smallpox, measles, and scarlet fever, now first published. Reports on the Diseases in London. A new edition: and detached papers on medical subjects collected from various periodical publications.

(The "detached papers" in this volume are: A remarkable case of abstinence, from: Medical Communications **2**: 113, 1790; Case of obstruction of the bowels; with remarks, from: London Medical Journal **5**:401, 1785; Singular termination of dropsy: from: London Medical Journal **7**:189, 1786; Observations on the use of arsenic in intermittent fevers, from: London Medical Journal **8**: 191, 1787; Cases of ischuria renalis in children, from: Medical Facts and Observations **3**:1, 1792.)

(*a*) Ibid., p. 410.

(*b*) Ibid., p. 351.

(*c*) Ibid., p. 388.
(*d*) Ibid., p. 361.
(*e*) Ibid., p. 390.
(*f*) Ibid., p. 293.
(*g*) Ibid., p. 240.
(*h*) Ibid., p. 405.
(*i*) Ibid., pp. 344-349.
(*j*) Ibid., p. 295, footnote.
(*k*) Ibid., pp. 1, 87.
(*l*) Ibid., Preface, p. xxv.
(*m*) Ibid., p. 87, footnote by Ashby Smith.
(*n*) Ibid., p. 398.
(*o*) Ibid., p. 344.
(*p*) Ibid., p. 337.

The following works of Bateman's contain so much of Willan's material that they are properly included in a list of his works.

30. Bateman, T.: Delineations of cutaneous diseases exhibiting the characteristic appearances of the principal genera and species comprised in the classification of the late Dr. Willan; and completing the series of engravings begun by that author, London, 1817. (This book went through several editions and was translated into German as: Abbildungen von Hautkrankheiten, etc., Weimar, 1830.)

31. Bateman, T.: A practical synopsis of cutaneous diseases, according to the arrangement of Dr. Willan, London, 1817. (This book went through many editions. There was a 7th London edition in 1829. At least two American editions were published. The one consulted was the 2nd American, from the 4th London edition, Philadelphia, 1818.)

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32. Bateman, T.: Biographical memoir of the late Dr. Willan, Edinburgh Medical and Surgical Journal **8**:502-510 (Oct.) 1812.

33. Unsigned note under "Deaths," Gentleman's Magazine **82**, pt. 1, p. 595, (June) 1812.

34. Unsigned note under "Additions to former Obituaries," Ibid., Pt. 1, Supplement, 674, 1812.

35. .....: Sketch of life of Robert Willan, 4to, Edinburgh, 1813. (This is referred to in Nouvelle Biographie Générale,[35] but I have not been able to locate it. It is not listed in any library catalog that I have been able to consult.)

The following are the chief later sketches. They are all based on Bateman's memoir, and contain practically nothing not found in it.

36. Dezeimeris, J. E.: Dictionnaire historique de la médecine, 1839, IV, p. 408.

37. Article, Willan, in: Munk, W.: The Roll of the Royal College of Physicians of London, Ed. 2, 1878, II, pp. 350-353.

38. Article, Willan, in: Nouvelle Biographie Générale, 1860, XLVI, p. 743.

39. Webb, W. W.: Article, Willan, in: Dictionary of National Biography, 1900, LXI, p. 284.

40. Hardaway, W. A.: Robert Willan and Dermatology, Presidential address at the first meeting of the Willan Dermatological Club of St. Louis, St. Louis Courier of Medicine **27**:161, 1902.

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41. Addison, Thomas: A collection of the published writings of the late Thomas Addison, Edited, etc., by Dr. Wilks and Dr. Baldy, New Sydenham Society, 1868, Biography p. ix.

42. Baas, J. H.: (Translation by Handerson): Outlines of the History of Medicine, 1889, p. 654.

43. Barlow, H. M.: Personal Communication, Nov. 24, 1925.

44. Baron, John: The Life of Edward Jenner, etc., 2 vols., London, Henry Colburn, 1838.

(*a*) Ibid., I, p. 354.
(*b*) Ibid., I, p. 280.
(*c*) Ibid., II, p. 362.

45. Bateman, T.: An account of the Institution for the Cure and Prevention of Fever in the Metropolis, Edinburgh, Medical and Surgical Journal **1**:117, 1805.

46. Bateman, T.: Reports of Diseases in London, 1804-1816, etc., preceded by historical view of the state of health in the metropolis in past times, London, 1819.

47. Chaplin, Arnold: Medicine in England during the reign of George III. The Fitzpatrick lectures delivered at the Royal College of Physicians, 1917-1918, London, Henry Kimpton, 1919.

(*a*) Ibid., p. 53.
(*b*) Ibid., p. 154, footnote.
(*c*) Ibid., p. 15.
(*d*) Ibid., p. 22.
(*e*) Ibid., p. 75.
(*f*) Ibid., p. 66.
(*g*) Ibid., p. 16.

48. Engman, M. F.: Personal Communication, September 14, 1925.

49. Fox, R. Hingston: Dr. John Fothergill and His Friends. Chapters in Eighteenth Century Life, London, Macmillan, 1919.

(*a*) Ibid., p. 382.
(*b*) Ibid., p. 154, footnote.

50. Haeser, H.: Lehrbuch der Geschichte der Medizin und der Epidemischen Krankheiten, 3 vols., Jena, 1875, III, p. 19.

51. Highmore, A.: Pietas Londonensis: The history, design, and present state of the various public charities in and near London, London, 1814, p. 394, The Public Dispensary.

52. Knowles, Richard B.: The Life of James Sheridan Knowles. Privately printed for James McHenry, London, 1872, pp. 15-17. (Only twenty-five copies printed. The copy consulted is in the Yale University Library.)

53. Langton, John & Bethell, George: A note on the Fothergillian Medals of the Medical Society of London, Transactions Med. Soc. London **28**:336, 1905.

54. Low, Sampson: The Charities of London. . . . Their origin and design, progress and present position. S. Low, London, 1850, pp. 65-66.

55. Meunier, L.: Histoire de la Medécine depuis ses origines jusqu'à nos jours. Paris, Le François, 1924, p. 348.

56. Osler, W.: On the visceral complications of erythema exudativum multiforme, Am. J. Med. Sc. **110**:629, 1895.

57. Puschman, Th. Handbuch der Geschichte der Medizin, Jena, 1905, III, p. 415. (Article by I. Bloch.)

58. Rayer, P.: A Theoretical and Practical Treatise on Diseases of the Skin. From the 2nd edition, etc., with notes by John Bell. Early & Hart, Philadelphia, 1845, p. 18.

59. Thomson, St. Clair: John Coakley Lettsom and the Foundation of the Medical Society, London, 1918.

60. Encyclopedia Brittanica, Articles Lustration, and Need Fire, for account of similar rites.

61. Report of the Public Dispensary for the Relief of Sick Poor. Plan of the Publick Dispensary in Carey Street, Lincoln's Inn Fields, London, 1789.

(This report should give some information about the foundation of the Dispensary. It and the one for 1817 are in the Surgeon General's Library, but could not be found when I desired to consult them.)

62. Reports of the Society for Bettering the Condition and Increasing the Comforts of the Poor, London, III, 1802, pp. 7-8.

(*a*) Ibid., III, p. 208, footnote.

63. .....: State of the Institution for the Cure and Prevention of Contagious Fever in the Metropolis, price sixpence, 48 pp., London, Phillips, May 6, 1803, p. 3.

64. Transactions of The Willan Society of London, A Society for the Study of Dermatology and Syphilis. Edited by James Startin, Honorary Surgeon to St. John's Hospital for Diseases of the Skin, London, and Joint Honorary Secretary to the Willan Society. Vol. I, London: Printed for the Society by Harrison and Sons, St. Martin's Lane, 1885, p. 1.

AN UNUSUAL TYPE OF PEMPHIGUS

COMBINING FEATURES OF LUPUS ERYTHEMATOSUS *

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AND

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CHICAGO

Since 1923 we have had under our care a patient with an example of what was to us a unique case of pemphigus, although this diagnosis was reached only after a long period of observation. We have seen four similar cases during the past six years, three of these in patients of Dr. O. S. Ormsby and one in a patient at the Barnard Skin and Cancer Hospital, St. Louis, in the service of Drs. Engman and Mook. In addition, we have been able to collect six cases from the various society transactions recorded in the ARCHIVES OF DERMATOLOGY AND SYPHILOLOGY. Of these eleven cases, all but one have been shown at meetings of dermatological societies, and in every instance they have excited considerable discussion and difference of opinion as to their proper classification among dermatoses. We have been unable to find a description of this eruption in the literature, and because of its relative frequency and a lack of familiarity with it among dermatologists, we have believed it worthy of special consideration.

The syndrome is characterized by two distinct clinical features. On the face the patient presents an eruption which at times is apparently typical lupus erythematosus, involving the butterfly area and presenting discoid lesions with "carpet tack" scales; at other times the facial involvement is suggestive of a severe seborrheic dermatitis, while in still other instances the picture presents certain features of each of these diseases, and is aptly described by Hebra's old term "seborrhea congestiva." The manifestations on the face are further characterized by a peculiar evanescence and variability, the lesions at times appearing extensively over night and disappearing almost as readily; and it has been noted in several instances that while the eruption at one time may seem typical of lupus erythematosus, at another time it may simulate a severely inflammatory seborrheic dermatitis.

The second part of the clinical picture is revealed in the eruption on the body. Here the lesions begin as bullae, although as a rule this can be determined only after repeated observations. Usually the bullae are relatively small and flaccid, rupturing readily and resulting in the

* Read at the Forty-Eighth Annual Meeting of the American Dermatological Association, Washington, D. C., May 4, 5 and 6, 1925.

development of two varieties of lesions. The first of these is a raw, reddish patch denuded of epidermis. As a result of the confluence of these lesions, large denuded patches, sometimes reaching the size of the palm, may form. The second variety is characterized by the development of lesions covered with thick, greasy, yellowish scale crusts, suggesting an extremely greasy seborrheic keratosis, or impetiginous or psoriatic lesions. It is readily possible, with continued observation of the patient, to trace the evolution of both of these lesions from the primary bulla, and not infrequently to see the crusted lesions develop on the smaller denuded areas. The lesions as a rule involute spontaneously, usually after some time, leaving pigmented patches. Fresh bullae may develop in these pigmented areas.

REPORT OF A CASE

History.—Mrs. B. L., aged 24, Jewish and of Russian-Polish descent, was first seen by one of us (F. E. S.) in April, 1923, because of an eruption on her face and trunk which was accompanied by intense itching and burning. Her father was living and well; her mother died during childbirth at the age of 29. The patient had had the usual diseases of childhood. Four years prior to consultation both ovaries, both tubes and her appendix were removed. Tonsillectomy was performed in January, 1923. Her menstrual history began at the age of 13, and she had always had dysmenorrhea, with profuse flow and pain. For two years following her operation her menstruation was normal, but for the last two years her menses had occurred at intervals of two weeks, lasting six or seven days, and accompanied by severe pain. Leukorrhea had been profuse and constant for the last nine years. She had had two children, both at full term with normal delivery. The first child was living and well, but the second died in infancy of unknown cause. She was married in 1914, but her husband left her about three years ago. The patient had not been addicted to drugs or alcohol. Her sleep was disturbed on account of the burning and itching of the skin lesions. She suffered from constipation, which could be controlled by diet. She did not complain of headache or dizziness, of visual or auditory disturbance or soreness about the mouth, tongue or throat. She had had no cough, night sweats or urinary disturbance. Her weight was stationary.

Her skin eruption began in the summer of 1920 with a red spot "like a mosquito bite" in the right scapular region. This itched intensely, and after scratching it, there was a discharge of purulent material. About a month later, a number of other lesions appeared over the back, and a short time later on the chest and abdomen, so that in two or three months after the appearance of the first lesions the eruption had become generalized over the trunk, especially over the upper half. All the lesions were now crusted. She had never noticed any definite blisters except at one time during the summer of 1922. One year after the onset she developed a similar eruption on the forehead, and about nine months later the nose and flush areas of the cheeks became involved, the lesions in the latter locations coalescing to form patches. This part of the eruption persisted, grew worse and was painful. She had never had any lesions in the mouth. She was seen by Dr. O. S. Ormsby six months after the onset of her trouble, and at that time he made a diagnosis of pemphigus. Her eruption then involved the face, chest, axillae, back and abdomen. During the five weeks of

his observation, it was noted that scales formed on the lesions about two weeks after their appearance and that no lesions disappeared. A thorough physical and laboratory examination at that time was negative except for the presence of some carious teeth and of congenital ptosis of the right upper eyelid. In April, 1923, she was in the hospital under the observation of Dr. L. H. Mayers. He reported that physical and roentgen-ray examination showed diffuse peribronchial

Fig. 1 (Case 1).—Condition of patient in April, 1924.

infection involving the entire right lung, with retraction of the upper half of the thorax on both sides. Physical examination, with the exception of the skin findings and carious teeth, was negative.

Description of Cutaneous Condition (April, 1923).—The scalp showed numerous rounded, slightly elevated papules covered with yellowish to brownish greasy scales.

The forehead presented about twenty pinhead to ten cent piece sized lesions, some of them reddish brown, pigmented patches, others dull reddish, slightly elevated papules with yellowish greasy scales, while in the region of the right eyebrow was a single large, irregularly outlined lesion presenting a moist, bright red base covered with a thick, clean, yellow crust.

On the flush portion of each cheek was a large, reddish, acutely inflammatory patch, rather sharply defined, irregular in outline, not infiltrated, and with no elevation in its margin. There were no telangiectatic vessels visible, but the follicles in the patch were noticeable dilated. The presence of thick impetiginous crusts made it apparent that these patches were of an exudative type, although no oozing was then apparent. On the right ala nasi was a bright red

Fig. 2 (Case 1).—Butterfly distribution on face in April, 1925.

patch of dermatitis the size of a ten cent piece, with a slightly elevated margin and with a depressed center covered with a thin yellowish crust. Over the outer portion of the cheeks and in the temporal region were a number of patches similar to that in the region of the right eyebrow.

Over the trunk, especially in the sternal and interscapular regions, there was a number of lesions in varying stages of evolution. The earliest of these were split-pea-sized, flaccid bullae, the tops of which were easily removed by rubbing with the finger tip, leaving a bright red, moist and oozing base, which was tender to the touch. These lesions showed some tendency to coalescence, producing slightly larger denuded patches. Another type of lesion present was a dull red, slightly elevated papule covered with adherent, dry, whitish, keratotic scales or yellowish, greasy scale crusts. There were also pigmented patches of

light brown and of varying size. Lastly, on the lateral aspects of the trunk were a few circinate brownish stains suggesting a fading erythema exudativum of the circinate type, and the patient said that lesions of this type had developed in a recurrent fashion, each attack lasting from a few days to a week.

The mucous membranes showed no involvement.

Subsequent History and Course.—The patient had been under observation more or less regularly except for a period of nine months during 1923, when she was in California. While there she was seen by Drs. E. D. Lovejoy and Moses Scholz. A careful examination there failed to disclose any evidence of tuberculosis, and the patient gained 18 pounds (8.2 kg.) in weight, although the use of various diets, an autogenous vaccine prepared from organisms recovered from

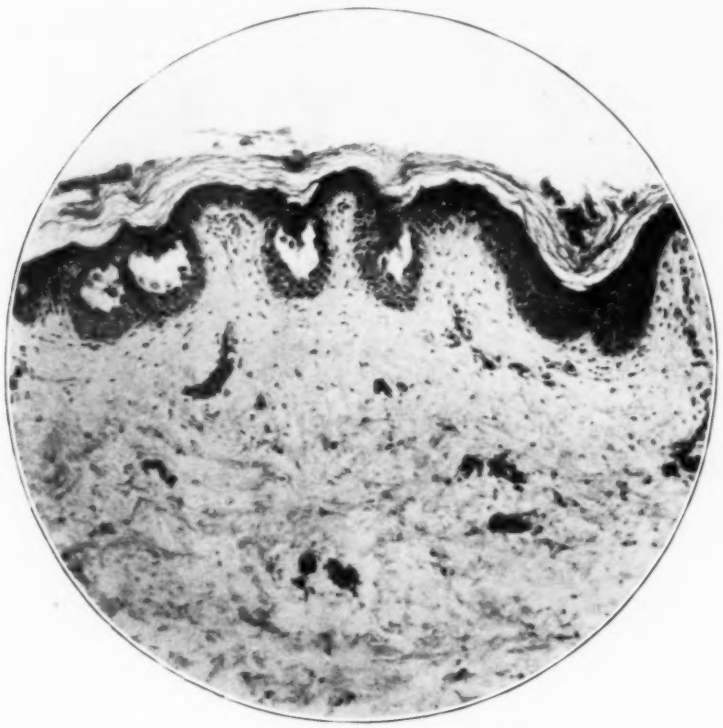

Fig. 3 (Case 1).—Microscopic vesiculation in a keratotic lesion.

the urine, iron and quinin preparations and the roentgen ray failed to cause any amelioration of the skin condition.

In August, 1924, she was seen about three days after she had had a profuse eruption of bullae on the chest, which had ruptured and left a denuded area the size of a bread and butter plate, while the cheeks showed a similar and extensive involvement. At that time Nickolsky's sign was readily demonstrated on the chest, and a diagnosis of pemphigus foliaceus was made by us, and concurred in by Dr. W. A. Pusey.

Recently the patient has been under our observation in the University of Illinois College of Medicine Hospital. During her stay there she has developed

several bullous outbreaks with extensive development of oozing patches on the face and chest. Blood culture failed to show any organisms in the blood stream. The sugar and nonprotein nitrogen contents of the blood were within normal limits. Roentgen-ray examination of the chest at this time showed a marked increase of the hilum shadows, with numerous calcareous deposits. The linear markings were exaggerated, but there was no evidence of any parenchymal infiltration. The findings were those which might be produced by any low grade recurring or chronic infection, or by tuberculosis of the hilum type. The calcareous deposits were probably calcified peribronchial glands.

She has been treated by us with various measures, including a desultory and inadequate course of iron cacodylate and coagulen, but there has been no tendency to improvement, and the course of the condition is slowly progressive.

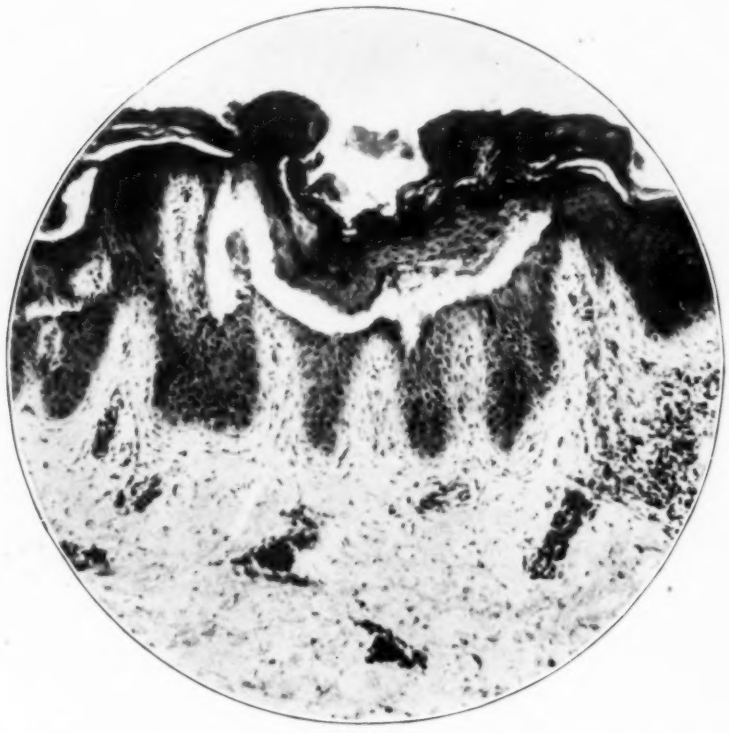

Fig. 4 (Case 1).—Further stage in vesiculation in same lesion.

CASE 2.—*History.*—Mrs. F. A., aged 50, American, seen in the outpatient department of the Barnard Skin and Cancer Hospital, St. Louis, in January, 1922, complained of a skin eruption which began at the time of her menopause, two years before. She first noticed small, brown, elevated, slightly scaly spots on the lower part of the right side of the abdomen, which disappeared with the use of an ointment. One month later, a spot appeared on the right cheek, and rapidly spread to involve the nose, face and body.

The patient had had measles at the age of 12. She had always been constipated and complained of nocturia. She had been married twenty years and had been pregnant three times. One child was born dead, one pair of twins died of

"summer complaint" at 10 months of age, and the third child was alive and well at 19 years of age. Her menstrual history was negative, and she reached the menopause in 1920.

Physical Examination.—Over the nose and flush areas of the cheeks was a butterfly shaped patch of inflammatory, indurated, scaling dermatitis with a sharply defined margin. In addition, there were present on the face and forehead numerous lesions which were covered with yellowish, greasy, slightly adherent scales and which did not bleed on removing the crusts. On the body were numerous individual lesions covered with thick, yellowish scales.

Fig. 5 (Case 2).—Condition of face on Jan. 5, 1922.

Physical examination at that time was negative. Numerous bullae continued to appear, and the whole body soon became involved. The bullae ruptured easily, crusts formed, and when these were removed, a red, moist base was seen. Before each bullous outbreak she complained of chills. She was admitted to the Barnard Skin and Cancer Hospital, service of Dr. Engman, in July, 1922.

The original eruption, which looked like lupus erythematosus, had completely changed to a generalized erythematous eruption with marked desquamation. The bullous lesions were rapidly followed by the formation of crusts which were

greasy, yellow and slightly adherent. On removing the crust no bleeding was noted. The line of demarcation on the face and neck was gone, no normal skin remaining on the face. A red moist base was seen on removing the crusts or scales, and there was a foul odor to the discharge. A few fresh bullae were noted during her stay in the hospital. Physical examination otherwise was negative. There was no evidence of tuberculosis or syphilis on examination. During her stay in the hospital her temperature reached 101 F. in the afternoon and returned to normal in the morning. Sections of a lesion removed from the

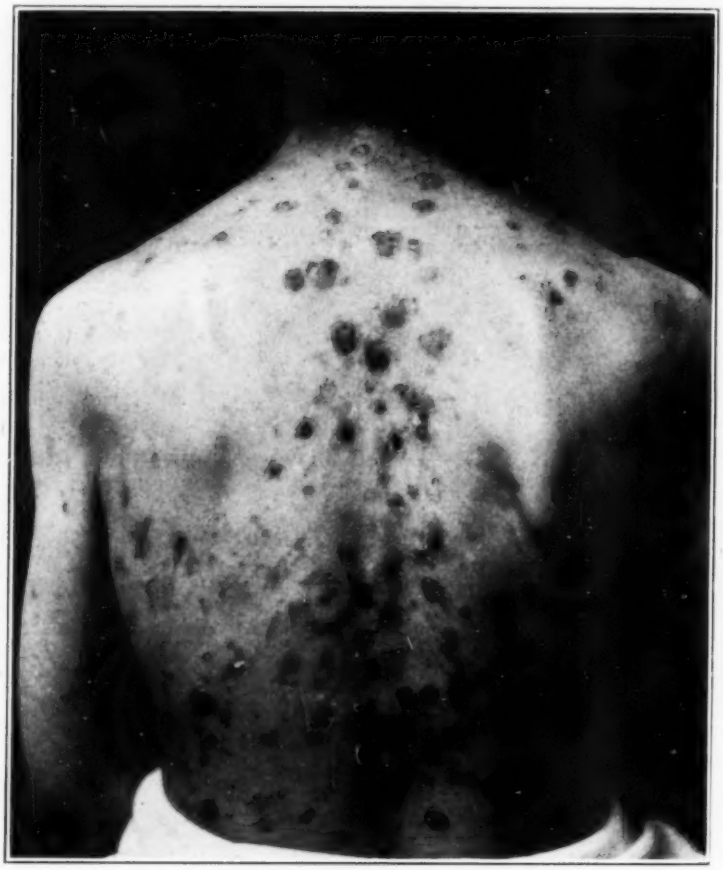

Fig. 6 (Case 2).—Typical crusted and keratotic lesions, Jan. 5, 1922.

back while she was a patient in the outpatient department revealed a picture resembling lupus erythematosus.

When the patient was first seen, a diagnosis of lupus erythematosus disseminatus was made. This was later changed to pemphigus vulgaris and finally to pemphigus foliaceus.

Case 3.—*History.*—Mrs. A. C., aged 27, Italian, was first seen by Dr. O. S. Ormsby in October, 1924, for an eruption on the body. This began on the arms and back eight years before, and two years later appeared on the face.

Recently it had spread rapidly on the face. At times, usually in the new lesions, there was marked pustulation. The lesions healed, leaving brownish, pigmented spots which persisted for months. The lesions, which began as vesicles, were always grouped, although they had become more isolated before she was seen. When first seen the eruption was present on the face, back, breasts and legs, and was accompanied by moderate itching. The lesions were symmetrical, and on the cheeks there were palm-sized, fairly well defined areas. The large lesions were covered with yellowish, large lamellar scales which, when detached, left bleeding surfaces. On the forehead, neck and face there were lesions varying in size from that of a pea to that of a bean. From the nucha to the sacrum there was a broad band of dirty brown, impetiginous, crusted lesions, varying in size from that of a dime to that of a quarter, with superficial bullae in the

Fig. 7 (Case 2).—Condition in July, 1922; decreased involvement of face and greater generalization on trunk.

lumbar region. Over the sternum and chest and on the upper arms there were pigmented patches of pea to dime size. On the outer parts of the breasts there were larger impetiginous lesions with dime-sized, mildly active lesions on the lower part of the shins. Some bullae arose from normal skin, while others showed a slightly erythematous base. Transitions between bullae and crusted lesions were seen. The throat and mouth were free from lesions, and there was no adenopathy.

Biopsy (Dr. Clark Finnerud).—The pigment was considerably increased, the granules discretely distributed throughout the cells of the epidermis and upper corium. There was moderate infiltration of the chronic type with small round and connective tissue cells. Except for perivascular distribution in the pars

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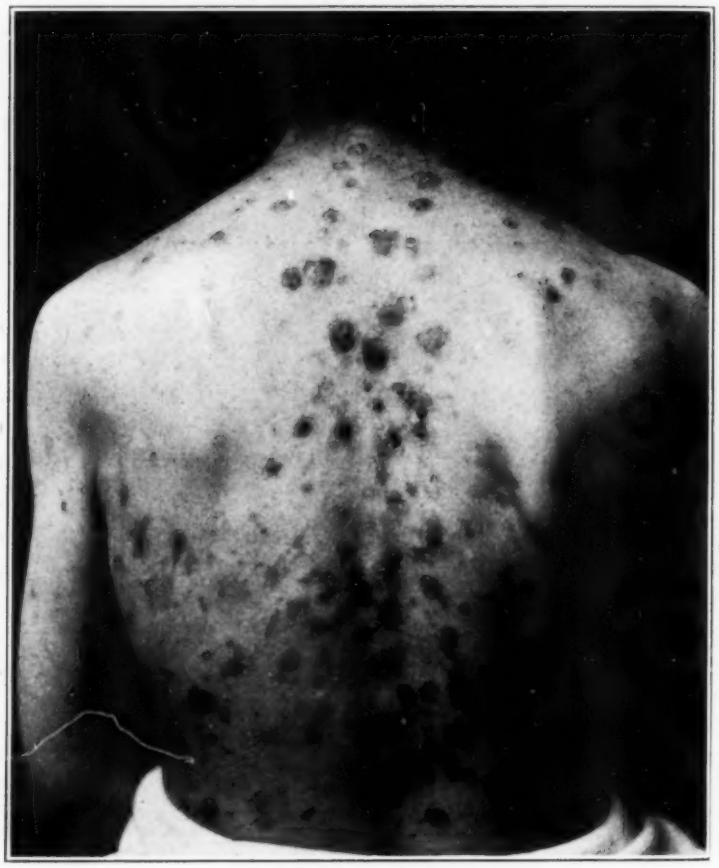

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Biopsy (Dr. Clark Finnerud).—The pigment was considerably increased, the granules discretely distributed throughout the cells of the epidermis and upper corium. There was moderate infiltration of the chronic type with small round and connective tissue cells. Except for perivascular distribution in the pars

reticularis, the infiltrate was limited to the papillary corium. A few migratory blood cells were found in the epidermis. Many epidermic cells showed vacuolar degeneration, but only slight parakeratosis was noted. Rather mild edema and vascular dilatation of the papillary corium was noted. From one to three plasma cells were present in each section, with no increase in the mast cells. No eosinophils were seen. There was no change in the elastic tissue.

An early type of pemphigus vegetans was diagnosed.

Case 4.—A man, aged 44, unmarried, American born, had an eruption which began on the scalp in the form of a seborrheic dermatitis and later spread to the scalp and back.[1] The patient said that slight bruises were sufficient to cause an abrasion of the skin, which healed slowly, and that small vesicles sometimes developed at the site of the bruises. Itching was moderate, the general health was good, and his personal and family history were negative. The Wassermann test was negative. Examination disclosed numerous nummular, crusted lesions, from one-eighth to one-quarter inch (0.3 to 0.6 cm.) in diameter, most of them occupying the back and chest, abdomen and buttocks. Pigmented areas and eczematous patches were present on the trunk. The patient said that most of

Fig. 8 (Case 2).—Profuse eruption on back, July 24, 1922.

the lesions were preceded by "blisters." The scalp presented a seborrheic dermatitis. The mucous membranes and genitalia were not involved. When the patient was presented again a month later, definite bullae were apparent, and Nikolsky's sign was demonstrable.

Case 5.—A man, aged 39, had a condition which began about four years before with the appearance of bullae on the abdomen.[2] Other lesions appeared later on the nose, the ears, in the scalp and scattered over the body, particularly between the shoulders. Remissions had occurred, but the disorder had never entirely cleared up. No vesicles had been seen, but Nikolsky's sign had been

1. This case was presented by Dr. Wise before the section on dermatology of the New York Academy of Medicine as "Case for Diagnosis (Pemphigus)." (J. Cutan. Dis. **37**:339 and 347, 1919).

2. This case was presented by Drs. Ormsby and Mitchell before the Chicago Dermatological Society as a case for diagnosis (Arch. Dermat. & Syph. **4**:284 [Aug.] 1921; **5**:152 [Jan.] 1922).

constantly present. Crusting had been present since the onset. There were no subjective symptoms. Exacerbations of rather severe character had occurred twice yearly in spite of treatment. All blood examinations had been negative. Examination of this patient disclosed a diffuse, erythematous, greasy, scaling dermatitis of the flush areas of the cheeks, nose, temples, behind the right ear and extending on the scalp. Several small flaccid vesicles were present in some of these areas. On the trunk and thighs, occupying principally the chest and back, were numerous, uniform appearing, superficial, discrete, dark red to brown,

Fig. 9 (Case 3).—Lupus erythematosus-like eruption of face.

pea to quarter size lesions similar in all essentials to those on the face. Repeated urine and stool examinations were negative. The Wassermann test was negative. The blood showed 3 per cent. of eosinophils.

Case 6.—A Russian, aged 48, one year before presentation noticed a red scaly patch on the nose and adjoining areas of the cheeks; six weeks before he was presented, a bullous eruption appeared with lesions grouped over the sternum,

in the axillae and inguinal folds and on the back.[3] There was one lesion on the mucous membranes. The lesions appeared in crops and were seldom seen as tense blebs, but mainly as raw areas and wrinkled, flaccid bullae, averaging about 1 cm. in diameter. The raw areas persisted for some time without marked crusting. There was some itching. The course was that usual for pemphigus, and the patient died a few months later (personal communication from Dr. Corson).

Fig. 10 (Case 3).—Keratotic lesions following bullae.

Case 7.—A Russian woman, aged 37, presented lesions on the nose, cheeks, under the breasts, in the axillae and on the back and scalp.[4] The lesions were sharply defined and had raised edges, distinctly scaly, and showed no telangiectasia

3. This case was presented by Dr. Edward F. Corson before the Philadelphia Dermatological Society as "Pemphigoid Eruption with Lupus Erythematosus" (Arch. Dermat. & Syph. **5**:140 [Jan.] 1922).

4. This case was presented by Dr. Fred Wise before the New York Dermatological Society, with a diagnosis of lupus erythematosus discoides of the face and lupus erythematosus disseminatus of the body (Arch. Dermat. & Syph. **9**:640 [May] 1924).

and no infiltration. Under the breasts the lesions showed a tendency to become confluent and were violaceous. The pulmonary examination was negative for tuberculosis. During the discussion when the case was presented, it was brought out that there was one bulla present, and that Nikolski's sign was readily demonstrable. The general consensus of opinion was that the condition was a developing pemphigus, and Dr. Wise, who stated that this was the first occasion on which bullous lesions were noted, agreed with this diagnosis. The resemblance to seborrheic dermatitis, on superficial examination, was also noted.

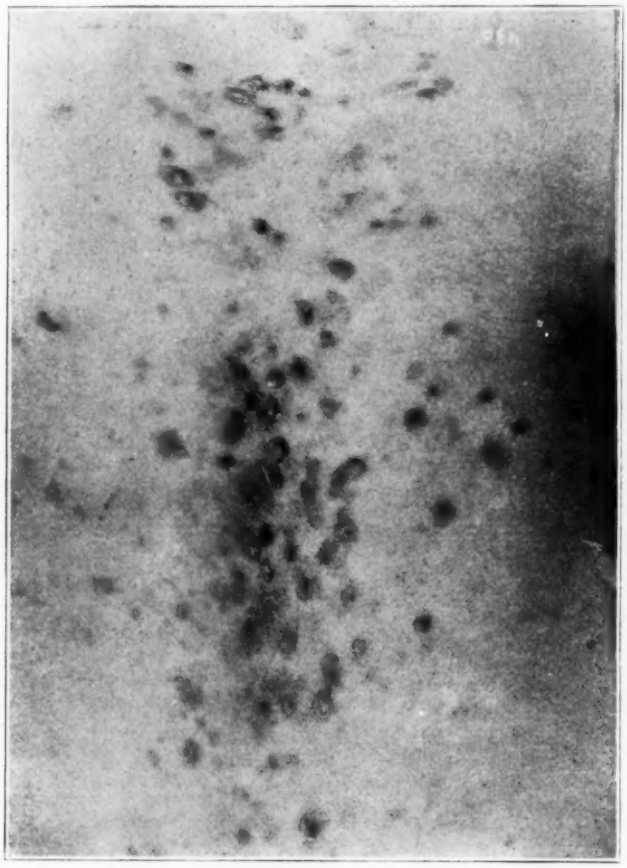

Fig. 11 (Case 3).—Tense bullous lesion among chronic keratotic lesions.

Case 8.—A man, aged 56, had had lesions on the face and trunk for a year.[5] The first lesion appeared on the face and increased peripherally. Lesions appeared and disappeared, and at times were bright red. There was moderate burning. On the face, neck, back and chest were lesions varying in size from that of a

5. This case was presented by Drs. Ormsby and Mitchell before the Chicago Dermatological Society as a case for diagnosis (Arch. Dermat. & Syph. **10**:394 [Sept.] 1924).

split pea to that of a dollar. On the sternum there were two patches about 5 cm. in diameter. These were covered with greasy, grayish scales which were firmly adherent. The lesions had improved materially under treatment with oil of cade ointment and Asiatic pills. This patient was shown again in January, 1924, with the condition practically unchanged.

CASE 9.—A Russian, aged 40, first seen about three months previous to presentation, had a generalized eruption which first appeared on the lower part of his body and gradually spread upward, the head being involved.[6] The patient said that the eruption first appeared as blisters and that during the last week blisters had again begun to appear. He never showed any bullae on examination, although

Fig. 12 (Case 3).—Typical bulla.

the lesions appeared as though they might have been bullae which had dried. The Wassermann test was negative. A biopsy report gave a diagnosis of seborrheic deramtitis.

The discussion centered about impetigo vulgaris and a benign type of pemphigus, but Dr. Williams called attention to a lesion beneath the left eye which had been present constantly and which looked like ordinary lupus erythematosus. He was inclined to believe that the case would turn out to be pemphigus.

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6. This case was presented by Dr. C. M. Williams before the New York Dermatological Society as a case for diagnosis (Arch. Dermat. & Syph. **10**:83 [July] 1924).

CASE 10.—The patient had first been seen a year before presentation, and at the time the nose showed a crusted lesion covering its entire surface.[7] When the crusts were removed, an exuding, acutely inflammatory surface was exposed, with numerous dilated follicular openings. The under surfaces of the crusts were studded with numerous stalactite-like projections which fitted into the follicular openings. At first the conditions was thought to be eczema aggravated by roentgen-ray treatments previously given elsewhere. Later the diagnosis was changed to acute lupus erythematosus, and following treatment with carbon dioxid snow, the nose healed. The patient then disappeared from observation, but three days before presentation he returned with a recurrence of the eruption on the nose with extension to the cheeks.

In addition, he presented numerous bullous lesions on the lips and over the upper part of the chest and shoulders, the condition then suggesting pemphigus. In the discussion when the case was presented erythema multiforme, lupus erythematosus and pemphigus were considered, Schamberg stating that the eruption on the face looked like lupus erythematosus, but that the subsequent development of bullae in the mouth and on the chest showed it to be pemphigus.

CASE 11.—A white woman, aged 41 presented an eruption of eight months' duration on the upper part of the chest and back, which had not altered under treatment.[8] The lesions consisted of inconspicuous blebs which dried to form crusts, beneath which was an oozing erosion. Some of these healed and left pigmented spots. In all there were about forty to fifty lesions.

In the discussion when the case was presented, a seborrheic type of psoriasis was suggested, but there was relative agreement that the condition was pemphigus. Dr. Corson recalled its similarity to his case described above.

COMMENT

In summarizing the findings in the eleven cases considered, we find practically an equal distribution as to sex, there being five males and five females, with the sex not mentioned in one case. The age of the patients at the beginning of the disorder varied from 19 to 55 years in the eight cases in which the age was stated, beginning during the fifth decade of life in four cases and during the second, third and sixth decades in one case each.

The duration of the condition at the time the patients were first seen varied from eight months to eight years, with an average of three and one-fourth years, while the patient in Case 5 was still alive and in practically the same condition four years later, and in our case the same condition obtained two years later. In only one case, that of Corson, is the patient known to have died as a result of the disease.

The nationality or race of the patient was given in seven instances as follows: One Italian, one American born, two Jewish and three Rus-

7. This case was presented by Dr. Carroll Wright before the Philadelphia Dermatological Society as a case for diagnosis (Arch. Dermat. & Syph. **10**:130 [July] 1924).

8. This case was presented by Dr. S. S. Greenbaum before the Philadelphia Dermatological Society (Arch. Dermat. & Syph. **12**:116 [July] 1925).

sian. The site of onset of the disease was noted in nine cases as follows: nose, 1 case; nose and cheeks, 1 case; scalp, 1 case; upper part of chest and back, 1 case; arms and back, 1 case; interscapular region, 1 case; lower portion of the body, 1 case; right side of lower part of abdomen, 1 case; abdomen, 1 case.

The fully developed eruption affected only the face, scalp and trunk as a rule, the arms and legs also being affected in several cases. The trunk was involved in every case and the face in all but one, while a seborrheic condition on the scalp occurred in several instances.

CLINICAL PICTURE

A study of the cases shows that the eruption has a predilection particularly for the face, trunk and scalp. On the face the nose and adjacent parts of the cheek and the forehead are usually most heavily involved. On the trunk the sternal and interscapular regions are almost invariably the most severely affected, but in several instances the axillae, inguinal folds and inframammary regions were principally involved. The extremities are involved sparsely or not at all.

In some instances the eruption is of the same type on the face and on the trunk, while in others there is a distinct difference in the involvement of the two parts, although transitional stages between the various forms can be traced. On the face the lesions have in some instances appeared as typical lupus erythematosus, in others as typical seborrheic dermatitis and in still others as acutely inflammatory patches of dermatitis, with some elements of both lupus erythematosus and of seborrheic dermatitis, and accompanied by crusting of such degree as to suggest impetigo. Bullae of a flaccid type have at times been seen in association with the foregoing changes. The eruptive manifestations on the face are characterized by an evanescence of the individual lesions, as they often appear rapidly, and may disappear spontaneously in a few days, usually leaving pigmented areas. Further, the involvement of the face in a single case may change its type, at one time appearing as a typical lupus erythematosus, at another as a seborrheic dermatitis. This tendency to evanescence and variability in the eruption on the face has been particularly noticeable in our case.

On the trunk three types of lesions may be found. The primary lesion is unquestionably a bulla, usually of a wrinkled, flaccid appearance, and with a thin roof. These lesions tend to rupture readily, and give rise to the other two types. By coalescence or extension of the ruptured bullae, there may result large patches of denuded, raw appearing, sharply defined, oozing dermatitis, often considerably crusted. These lesions tend to disappear spontaneously, and leave reddish or brownish pigmented areas in which fresh bullae may again appear. Here again evanescence and a variability in appearance may be noted. When

the ruptured bullae do not enlarge appreciably, they produce what is probably the most characteristic lesion on the trunk, an inflammatory base covered with a thick crust or scale crust, which is usually of a greasy, seborrheic type, but which may be dry, the lesions then resembling senile keratoses, or they may resemble psoriatic or impetiginous lesions. They may be yellowish, whitish or dirty in appearance. These crusts or scales are usually firmly adherent, and on removal leave a raw bleeding base. The lesions of this type are persistent but tend to involute eventually, leaving brownish stains. These same crusted lesions are seen at times on the face as well as on the trunk, but if present they are usually less numerous and less chronic in course. A patient may show bullae, the large patches, and the crusted keratotic lesions at the same time.

The transitions from the bulla to the crusted lesion are well shown in the histologic sections taken from the different stages.

There is a decided tendency for the bullous lesions to appear in crops, and unless the patient is under close observation for a long period, their occurrence may be discovered only by questioning the patient. The mucous membranes have shown lesions of a bullous type in two cases.

As a rule, symptoms have been of little consequence. In seven cases no symptoms have been reported, while in three mild itching was reported. In our case there was complaint of intense itching, burning and pain, but the patient is excessively neurotic and much of her complaint can be discounted.

As may be surmised from the foregoing description of the eruption, numerous possibilities must be thought of in the differential diagnosis, and this is further borne out by a consideration of the various opinions expressed by a number of dermatologists when the several cases were demonstrated. Among the diagnoses mentioned on these occasions were impetigo vulgaris, dermatitis medicamentosa, epidermolysis bullosa, erythema multiforme, lupus erythematosus disseminatus, seborrheic dermatitis, lupus erythematosus with a pemphigoid eruption on the body, and pemphigus. Study of the course and characteristics of the eruption in this series of cases, however, enables one to exclude from consideration everything but lupus erythematosus disseminatus, pemphigus and lupus erythematosus in combination with pemphigus.

Against the diagnosis of lupus erythematosus disseminatus may be mentioned the distinct tendency in that disorder to involvement of the extremities, which in the condition under consideration are only slightly or not at all affected. In lupus erythematosus disseminatus bullae occur rarely, in contradistinction to this disorder, in which they are constantly present. Furthermore, constitutional symptoms are usually present in severe cases of lupus erythematosus, and its course is relatively acute

and often fatal. A tendency to atrophy is also commonly seen, while in this disorder it is lacking or but slightly evident. Finally, the mucous membranes are rarely involved, while in our series two of eleven cases showed involvement of the mucosae.

In attempting to establish a diagnosis of pemphigus for this condition, several positive findings may be mentioned. In one case (Case 6), which was a typical example, the patient's disease followed the usual course of pemphigus, and he died after a little more than a year from the onset of the disease. In no other case did death ensue during the time that the reports cover, but the picture was sufficiently definite in several instances to permit a diagnosis of pemphigus to be accepted by numerous observers, and it is possible that further information regarding these cases would disclose a greater proportion of fatal terminations. Further, the eruption in this condition is primarily of a bullous type, and although the bullae are for the most part flaccid, typical tense bullae have been seen, and these not infrequently arise from a sound skin. Further, confirmation of the alliance of this disease with pemphigus is shown by mention of the presence of Nikolski's sign in three cases, while in the other cases its presence or absence was not noted. The involvement of the mucous membranes cited in two cases should also be mentioned, as should the involvement of the axillae, inframammary and inguinal regions in several instances. While nothing definite could be determined as to a preponderance of patients of Jewish extraction, as is usually found in typical pemphigus, the data are at least suggestive. The race was not stated in four instances, while the remaining seven included two Jewish patients, three Russians, one American born and one Italian. It is probable that some of the unknown or the Russians were of the Jewish race.

It cannot be denied, however, that in several of these cases manifestations occur which are typical of lupus erythematosus and which are not found in the ordinary types of pemphigus. There are, then, two possibilities that must be considered—either that manifestations resembling lupus erythematosus can occur as an atypical feature of pemphigus or that we are dealing here with a syndrome in which pemphigus occurs in combination with lupus erythematosus. Although the former theory cannot be definitely excluded, we believe that the latter conception is the more probable. The opinion is held by a number of observers that a group of toxic eruptions exists, including pemphigus, lupus erythematosus, erythema multiforme and other toxic erythemas, dermatitis herpetiformis, urticaria, etc., the members of which are closely allied from the etiologic standpoint, and they believe that a single toxic agent may produce one of these diseases in one person and another of these conditions in a second person, or that it may produce more than one of these conditions in one person at different times.

If we accept this contention, it is easy to assume that with the syndrome which we are describing we have a common etiologic factor producing at the same time features of both pemphigus and lupus erythematosus. This conception is supported by the fact that in our patient we have been able to observe every gradation between the features of pemphigus on the one hand and of lupus erythematosus on the other.

TREATMENT

A number of measures have been employed in the treatment of the several cases recorded, but in no case has there been any improvement worthy of mention as a result of the measures employed.

SUMMARY

Basing our report on a series of four cases personally observed, to which we have added seven cases culled from the transactions of several dermatological societies, we have described a syndrome in which the patients present a dermatosis involving chiefly or exclusively the head and trunk. The clinical picture embraces features of both lupus erythematosus and pemphigus. The manifestations of the former disease involve the scalp and face, in some cases with typical discoid patches with "carpet tack" scaling, in others with an exceedingly inflammatory reaction, suggesting a severely congested seborrheic dermatitis. These manifestations on the face are further notable for their evanescent character and for their tendency to change from the more chronic to the more acute type with unusual rapidity.

The lesions of pemphigus present themselves on the trunk, usually in the areas involved in seborrheic dermatitis. The usual lesion is a flaccid bulla, although tense bullae are seen occasionally. The bullae rupture readily, and on their sites develop scaling or crusted lesions, the scales or crusts being relatively thick, and dry or greasy. These keratotic lesions tend to persist for long periods, but usually involute spontaneously, often leaving pigmented stains. As the result of the coalescence of bullae, large denuded and moist patches are frequently formed.

While death was reported to have occurred in one case, the course of the disease is essentially benign, there is little or no interference with the patients' general health, and subjective symptoms are slight or lacking.

CONCLUSIONS

The peculiar clinical features of the dermatosis described make it difficult to determine beyond dispute its proper place among cutaneous disorders, embracing as it does features both of pemphigus and lupus erythematosus and yet not conforming to the ordinary picture of either

one of these conditions, it is possible that the disease represents a toxic eruption which should be regarded as a transition between lupus erythematosus disseminatus and pemphigus.

DISCUSSION

Dr. Oliver S. Ormsby, Chicago: These cases have been under discussion for a number of years and recorded in the society transactions. It has appeared that the syndrome presented was different from pemphigus, lupus erythematosus and seborrheic dermatitis, the features of all of which it combined. It seemed possible that it might be a separate clinical entity. I encouraged Dr. Senear to try to solve the problem. His placing it in the pemphigus group is probably correct.

The benign character of the disease in the patients observed has been strikingly different from that of pemphigus. One patient has been under constant observation for seven years, and remains in perfect health. Treatment in this case was of some value, but complete recovery has not occurred. The evolution of the lesions through the various types has been observed repeatedly. In another of the patients a severe attack of bullous lesions recently occurred. It is apparent as the number of cases increases, all having this particular syndrome, that there must be a common etiologic factor that induces clinical manifestations differing from the usual forms with which we are familiar. Further observation and study may reveal findings of value in finally establishing their nosologic position.

Dr. J. Frank Schamberg, Philadelphia: I can add one point in regard to the case presented by Dr. Greenbaum. In that case both Dr. Greenbaum and I felt that the condition was pemphigus, with features of lupus erythematosus. The other members of the society dissented, and thought it was lupus erythematosus. The subsequent course was typical of pemphigus, and if I am not mistaken the same was true of the case presented by Dr. Carroll Wright, and that did result in pemphigus. I am sure that in at least some of these cases we are dealing with pemphigus in the early stages, with the symptoms of lupus erythematosus.

I am glad Dr. Senear called attention to the Nikolsky sign. In many of these cases if you rub your thumb firmly over the lesions you find that you are dealing with a bleb which at first was not recognizable. The skin will come right off, and I feel that this is of distinct value in the early recognition of pemphigus.

Dr. Hermann Goldenberg, New York City: It was my fortune to see case 9, and I wish to report the further findings. The resemblance to his case was shown by Dr. Senear so plainly that it is not necessary to go into that. This patient was seen by me subsequent to the time that Dr. Williams presented it, and without knowing that he had presented the patient I made on that occasion a diagnosis of pemphigus and communicated with Dr. Williams to this effect. I made the diagnosis of pemphigus in spite of the fact that the patient did not have the bullae or Nikolsky sign. He had an eruption on the face which resembled lupus erythematosus, and on the chest and back lesions which at first sight looked like impetigo contagiosa. On close inspection one could see, however, that they were made up of dried up bullae covered with thick crusts. My diagnosis of pemphigus was subsequently verified by the appearance of typical bullae on a noninflammatory basis. The patient is now under the care of Dr. F. Wise, with a typical pemphigus foliaceus.

DR. WILLIAM H. MOOK, St. Louis: I think we all have the same difficulty in the early diagnosis of these cases. On the first examination our impression is that they are lupus erythematosus with a few pemphigoid lesions. Sometimes they are suggestive of atypical lichen planus with bullae. It has been our experience that after five or six weeks' observation and study of the patients we have changed our diagnosis two or three times, but in all of them our final conclusion has been that the cases are more like pemphigus than lupus erythematosus.

DR. THOMAS C. GILCHRIST, Baltimore: This valuable paper simply exemplifies again that we get widely different clinical pictures due to the same cause, and widely different clinical pictures due to different causes. I think this is not a new description but a variation of the same disease. In the patient mentioned last night, there was a somewhat similar lesion on the face that was typical of lupus erythematosus, and the patient is free from the condition at present.

DR. FRED WISE, New York: To illustrate the fact that this group of cases should not be called pemphigus, I will briefly recite an experience with one case.

A Jewess, aged 45, was diagnosed as having lupus erythematosus disseminatus affecting the skin of the face and body. Histologic section of a lesion of the face showed the characteristic changes of lupus erythematosus. A week later she was presented before one of the dermatologic societies and was introduced as having a case of lupus erythematosus disseminatus. After we had undressed her, much to my chagrin, we found that she had pemphigoid lesions on various parts of the trunk. We are not justified in assuming that these adventitious bullae are those of true pemphigus. They resemble pemphigus, but, with the exception of being bullous lesions, they do not correspond to the clinical picture of that disease.

DR. CHARLES M. WILLIAMS, New York: I remember very well the case referred to by Dr. Goldenberg. The man was in perfect health. Since then I have had two cases with lesions apparently typical of lupus erythematosus but presenting bullae. Both patients were very sick. One woman had scars all over the scalp from a secondary infection. The second woman died as the result of a badly decompensated heart. I think it is impossible to tell whether these are cases of pemphigus or not when the lesions are so varied and we do not know the etiologic factor. I do not know how this can be determined, but when we know the etiology we may be able to make a definite diagnosis.

DR. FRANCIS E. SENEAR, Chicago: I appreciate this discussion very much, for I have received a good deal of help from it. I brought out in the conclusions that we were not willing to put ourselves on record as calling these cases pemphigus because of the benign course and some atypical features. The discussion brought out, I think, the weight of evidence that would enable us to make the statement that the majority of these cases at least represent a new type of pemphigus.

PATHOGENESIS OF FOX-FORDYCE DISEASE*

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The syndrome of Fox-Fordyce disease was first described in 1902 by the men whose name it bears. The cases that have since become known have not added any essentially new characteristics. The symptoms of the disease are constant, and consist of small follicular nodules in the axillae, the mammillary region, the mons veneris and occasionally on the vulva. These nodules are often arranged in parallel rows or columns, presenting only slight inflammatory manifestations of the adjacent skin area, but are accompanied by severe itching, which resists all forms of treatment. We have not made any progress in our knowledge of the pathogenesis of the condition since it was first described. For the most part, investigators have been content to classify it as a "nervous" condition belonging to the neurodermatitis group. During observation of my cases, which, true to type, presented localizations on the axillae, mammae and pubes, the regularity and uniformity of the localization, together with the failure of all forms of treatment, were the factors that occupied my mind most and made it impossible for me to banish the question: "Why do the nodules appear there and not elsewhere?" I noted that the localization in this disease coincided closely with the sites of predilection observed in other conditions, such as acanthosis nigricans, impetigo herpetiformis, pemphigus vegetans and erythrasma. The similarity between the localization of Fox-Fordyce disease and of pediculi pubis especially caused me to consider the question whether or not the large sweat glands of the skin—the so-called odoriferous glands (*Duftdrüsen*)—might have any etiologic relation to the condition. My conjecture was confirmed by the histologic findings, and I was thus led to the formulation of an effective therapy.

REPORT OF CASES

CASE 1.[1]—W. A., a woman, aged 34, was the offspring of a mixed marriage, the father, whom the patient resembled in habitus, being a Jew. The patient's health had always been good heretofore. She had had no menstrual disturbances, and had given birth to two healthy children. In January, 1923, the patient consulted me, saying that for a few months prior to examination she had been suffering from severe itching in the axilla and at the border of the pubes, so that she spent many sleepless nights. On examination, I found that

* Dedicated to the memory of John A. Fordyce.

1. This patient was presented before the Prague Dermatologic Society. (Pick: Fox-Fordyce Disease, Zentralbl. f. H. u. G. **16**:753 [Jan. 3] 1925.)

the areas affected presented small, brownish, slightly transparent nodules, some of which showed a parallel arrangement. The axillary hair was scanty. From some of the nodules, broken hair shafts protruded; others showed in the center an empty follicular opening, which, when sharply pressed, emitted a drop of a thin and slightly turbid secretion. Except for a slight pigmentation, the skin of the axillary cavity appeared normal, although some of the nodules had been excoriated by scratching. The surrounding area was not inflamed. Lichenification, which always occurs in neurodermatitis, was absent. Not being familiar with just this clinical picture, I recorded the disease at first as "acanthosis of the axilla and mons veneris." The patient was treated by me for three months, without improvement. I had employed all kinds of ointments, plasters and inunctions, and had applied also roentgen rays and mercury vapor lamp treatment. I was not surprised that the patient ceased coming after three months' treatment had proved unavailing. Two years later, I requested the patient to come to my office. In the meantime, I had learned from the literature the correct diagnosis of the condition. On reexamination, both the subjective and the objective aspects of the clinical picture were found to be unchanged. On the basis of Schiefferdecker's researches, I reached the conclusion that there was an endocrine relation of the condition to the generative organs. I resolved, therefore, to try organotherapy, and administered, three times daily, 2 ovarian tablets (Merck brand). During the first week, the remedy seemingly brought about a partial subsidence of the itching. The patient said that she was able to sleep undisturbed, which she had not been able to do for a long time. Soon the itching subsided entirely, but reappeared at the menstrual periods. Administration of a corpus luteum preparation just before the onset of menstruation and during the first days thereof reduced the itching at this period. However, the objective symptoms have not changed much. The nodules are just as prominent as they were before, but the excoriations due to scratching are absent. The patient has continued the treatment now for four months. An attempt to get along without the remedy resulted in an immediate return of the itching.

CASE 2.—W. A., aged 27, a housekeeper, unmarried, who had descended from two different races, presented a pronounced Jewish appearance. She said that she and her brother were often taken for Jews, though the Jewish strain came into the family two generations back. When the patient was first observed in March, 1925, the condition had been present for four months. The first symptoms had been severe itching in the axillary cavity and in the pubic region. The skin changes were caused by the constant scratching. Menstruation had begun at the age of 17 and had been irregular and profuse, lasting for a week. In this case, in contrast to the previous one, the axillary cavities and the vulvar region, up to and even beyond the genitocrural fold, presented the picture of lichenized eczema, so that, at first, the diagnosis "neurodermatitis" was reached. Under roentgen-ray treatment, the eczematous changes in the axillary cavity were healed, and the itching at that point disappeared entirely. The skin of the axillary cavity, except for a slight pigmentation, was normal, but in the same arrangement as in case 1; there were the characteristic nodules of the Fox-Fordyce disease.

In the pubic region, also, the eczematous changes were healed by the roentgen-ray treatment, but the itching, the patient stated, had increased, being most intense on the inner surface of the labia majora, the outer surface of the labia minora, and the regions of the anterior and the posterior labial commissures. At the sites mentioned, there were many minute nodules, which felt through the mucous membrane like so many shot; these nodules were light

brown, with a minute opening in the center. They varied in size from day to day. Some days they were scarcely palpable; other days, and, more particularly, just before or just after menstruation, they appeared to be larger. In view of the favorable results of ovarian therapy obtained in case 1, which appeared to be indicated in this case also by the irregular character of menstruation, ovarian tablets and corpus luteum were administered, and again the same prompt effect was secured. The itching abated and did not become severe again until the day before the onset of menstruation, continuing through the first day of the discharge. It is of interest to note that during a vacation of several weeks spent in a forest region of higher altitude, the patient became entirely relieved of the itching, in spite of the fact that her supply of tablets became exhausted and could not be renewed in the town where she was sojourning. On her return home, the itching soon reappeared, and could be kept down only by the constant use of the ovarian tablets.

The histologic examination of a specimen of skin taken from the axilla in case 1 revealed, as was expected, that the principal seat of the pathologic changes lay in the region of the large sweat glands. Before we pass on to a description of the findings, it seems desirable to consider Schiefferdecker's researches in this field, the importance of which for the student of dermatology does not seem as yet to be appreciated adequately.

SCHIEFFERDECKER'S FINDINGS

Schiefferdecker [2] divides the glands of the skin into (1) those which form their secretion through disintegration of the whole glandular cell (holocrine glands; for example, the sebaceous glands), and (2) those which eliminate only a portion of the cell in the formation of secretion (merocrine glands; for example, the sweat glands). According to the type of secretion, the merocrine glands are divided into those with a simple fluid secretion (eccrine glands, or simply e-glands), hitherto called "small sweat glands," and those in which also an evacuation of cell plasma and of substances contained therein takes place, including sometimes cell nuclei (apocrine glands, or simply a-glands), hitherto termed "large sweat glands." These two kinds of glands may be further distinguished: (1) In their development, as the e-glands are derived directly from the epidermis and their excretory duct opens directly on the skin surface; whereas the a-glands, and likewise the sebaceous glands, are developed secondarily from the hair papilla, for which reason their duct opens, as a rule, into the hair follicle and only rarely on the epidermis near by. (2) In their morphologic aspects, the apocrine glands are much larger, their tubes have much wider lumens (fig. 1) and do not lie so close together, so that there is more space for the nutrient connective tissue rich in cells. When fixed with formaldehyde

2. Schiefferdecker: Die Hautdrüsen des Menschen und der Säugetiere, ihre biologische und rassenanatomische Bedeutung, sowie die Muscularis sexualis, Stuttgart, E. Schweizerbart'sche Verlagsbuchhandlung, 1922. Schaffer: Anatomische Anzeiger **57,** no. 18, 1924. Klaar: Ztschr. f. Anat. und Entwcklngsges. **72,** no. 3-6, 1924.

and stained with hematoxylin-eosin, the e-glands take on a bluish and the a-glands a reddish tinge. (3) In the mode of secretion; the cells of the eccrine glands, which, as already mentioned, furnish only fluid secretion, show, in connection with secretion, no essential changes in form. The cells of the apocrine glands, on the other hand, pass through a complete cycle during the formation of secretion, which is plainly visible in the changes in the cell form. The flat cylindric epithelium develops into a tall layer of cells which resemble a palisade, and which often rest on their base with only one point (fig. 4). The broader end, turned toward the lumen, bears at a further stage a tongue-shaped process that extends into the lumen (fig. 3). This is either entirely or partially rejected along with the evacuated cell contents, and is found in the glandular lumen in the form of detritus, granular and lumpy masses, with remnants of cell nuclei (fig. 3). After this elimination, the contour of the cells becomes sharper, while the cells themselves become flatter and gradually reassume the character of flat cylindric epithelium. This mode of *"Auswuchssekretion"* (excrescence secretion), as Schiefferdecker terms it, in which portions of the cell are destroyed, distinguishes sharply the apocrine glands from the eccrine glands and allies them more closely with the sebaceous glands, with which they have in common also their development from the "primary epithelial germ." (4) With reference to occurrence; in the whole mammal order, the apocrine glands, which, with the hair covering, are distributed over the whole body, are much more numerous than the eccrine glands, which are found only on certain surfaces without hair covering. In many apes both kinds of glands occur side by side on the same areas; sometimes the eccrine glands even predominate, and in man it is the eccrine glands that are distributed over the entire surface of the skin, whereas the apocrine glands occur only in groups on certain areas of the skin, chiefly the axillary cavities, where the apocrine glands form a connected organ, the "organ of the axillary cavity"; also the region of the areola of mamma, the mons pubis and the labia majora in woman. There are marked differences in the various races of man with reference to the number and the distribution of the apocrine glands, and—within the races—in the two sexes. I shall have occasion to refer to these constitutional factors later. (5) Concerning the function of the glands, which, as is shown by the entirely different secretion, in the apocrine glands is different from that of the eccrine glands, which have the essential function through the giving off of their watery secretion to effect a cooling of the surface of the body.

HISTOLOGIC FINDINGS IN AUTHOR'S CASES

Turning now to the histologic findings of my cases, one finds in the epithelium and in the papillary layer of the corium only the commonly

described, slightly characteristic changes. The horny layer is in places parakeratotic; some of the follicular ducts especially are covered with more or less parakeratotic horny layers. The rods of the network near the follicular ducts are lengthened and show distinct acanthosis; the papillary layer of the corium is edematous; the fibers are short, torn, defective and less easily stainable than in the deeper portions. There are fewer cells; only in the region of the follicles, along their course, denser lines of small cell infiltration are found.

The principal changes are found in the deeper layers of the corium, in the region of the subcutaneous adipose tissue; that is to say, in the

Fig. 1.—Circumscribed infiltration in an apocrine gland; the epithelium of the tubes is for the most part destroyed; the muscular coat is plainly dentate; in the lumen of the tubes may be seen cell detritus and nuclear débris.

layer that is almost entirely taken up with the so-called small and large sweat glands (fig. 1). The process takes place only in the region of the large sweat glands, whereas the small sweat glands that lie in between them and often in close proximity show no visible changes. The process is characterized primarily by a small cell infiltration, which occurs in spots in the midst of the gland in dense, focal arrangement—in other places more in the form of bands and stripes, the detached connective tissue occupying the spaces between the lumina of the glands. The

infiltrate consists essentially of lymphocytes. It does not stop at the border of the gland tubes but penetrates in places the muscularis and reaches the cells of the epithelium, detaching them from their connection (fig. 2). The muscularis is then found to be studded with nuclei. The contours of the cylindric epithelial cells are obliterated, and these are only in part adherent to the base, being for the most part thrown into a disordered mass, so that numerous gaps in the epithelial coat arise, in which cells of the inflammatory infiltrate are found, which are also demonstrable in the free lumen along with detritus and rejected cell nuclei (fig. 2). In other respects, the epithelium shows the multiform picture described above. In the same gland, tubes with entirely flat

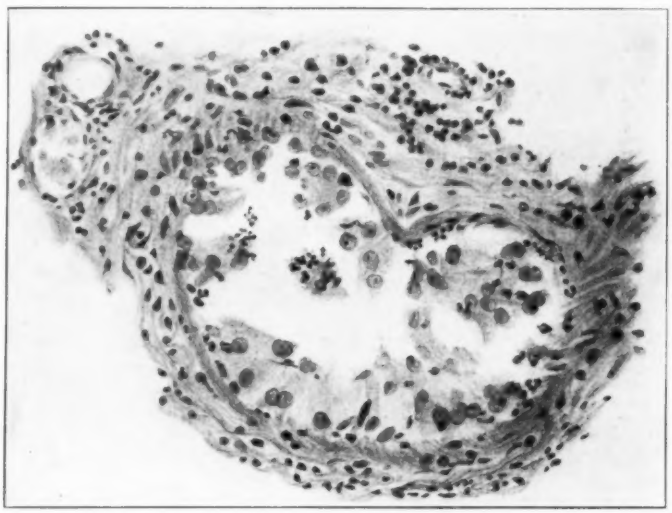

Fig. 2.—The small cell infiltration has broken through the muscular coat into the epithelial cells; the epithelium has been destroyed in places; the cells are, in part, detached and disarranged.

epithelium alternate with others that are invested with a tall, cylindric epithelium, from which a cupola-shaped secretion emerges. Also in these glandular tubes invested with apparently normal epithelium the latter appears loosened from its basement membrane for shorter (fig. 3) or longer (fig. 1) stretches. Often the whole epithelial covering lies detached in the lumen of the gland and the smooth muscle fibers running diagonally or transversely are visible at the edge as a dentate margin (fig. 3). The middle of the lumen of the gland is filled with cell detritus, in which, on staining with hematoxylin-eosin, circular or oval intensely blue formations are found, which, merging with one another, sometimes take on shapes resembling morococci (nuclear remains? fig. 3). Not infrequently, there were cell division figures in the epithelium of the

gland tubes (fig. 4); however, only when the epithelium had the character of tall cylindrical cells. In the flat cells, no mitotic karyokinetic forms were seen.

The histologic aspects also show us the process localized essentially in the region of the large sweat glands. It remains, however, doubtful to what extent the changes in the sweat glands themselves or in their epithelium are to be regarded as pathologic. In this connection, it is to be considered that these skin glands are, as Schiefferdecker states, among the most changeable organs of the body. It may be recalled also that Loeschke [3] demonstrated that the large sweat glands of the axillary cavity

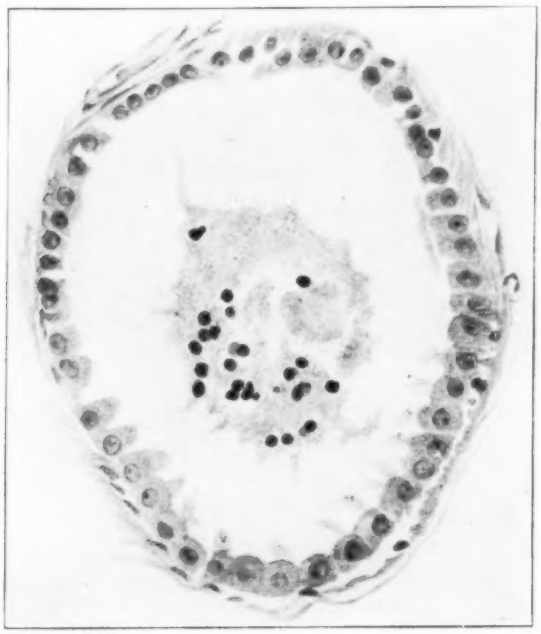

Fig. 3.—Type of apocrine secretion; from the cylindric epithelial cells tongue-like processes extend into the lumen; the epithelium is, in part, detached at its base; the surrounding muscular coat is plainly visible; in the lumen detritus and nuclear débris are noted.

in woman are affected by the cyclic changes in the genitalia. During menstruation, in the intermenstrual period, and during and after pregnancy, they pass through various changes in size, and the supposition is (researches on the subject are lacking) that the glandular epithelium also must present varying aspects at different times.

It thus becomes difficult to decide whether a given condition of the glandular epithelium is pathologic or not. For purposes of control,

3. Loeschke: Virchows Arch. f. Path. Anat. **255,** no. 1-2, 1925.

therefore, I have sought to compare my histologic findings with specimens from other cases, and I am indebted to Professor Rasch of Copenhagen for preparations derived from the case later published by Finsen. Except for nonessential differences (the inflammatory manifestations are less marked than in my case), these preparations present the same appearance as do mine. I took occasion also to show such a preparation to Professor Schiefferdecker, who expressed himself on the subject as follows: "What struck me as being most likely pathologic were these facts: In many places one sees transverse depressions, which correspond to the upper apexes of the gland tube, which have a tall dark epithelium, taking the hematoxylin stain strongly. The cells look shrunken and between them irregular gaps may be seen, so that the epithelium looks crumpled. Such depressions lie, for the most part, in about the same plane and in the uppermost part of the glands. Along

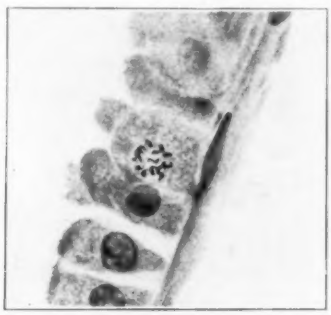

Fig. 4.—Wall of duct of apocrine gland; palisade-like arrangement of the tall cylindric cells; karyokinesis.

them one frequently finds small cell infiltration. In many places transverse furrows may be seen distinctly in the ducts of the glands, at which point the epithelium is somewhat changed. In the deeper portions of the glands one finds occasionally the wide tubes invested with a flat epithelium, which no longer presents a normal appearance, being dark, irregularly placed and presenting gaps. The conditions in these parts may be pathologic. Adjacent to the tubes again are found small cell infiltration. The glands are, therefore, in a pathologic condition, particularly in the uppermost parts; at the same time, the ducts are partially affected, and sometimes the deeper portions, or, occasionally, the whole gland. That is at least possible."

While it may still be questionable to what extent the changes in the glands themselves depart from the normal, there are three conditions that may be regarded as certainly pathologic: (1) the inflammatory focus in the region of the glands; (2) the penetration of the infiltrate between the cells of the glandular epithelium and the destruction of the

epithelium, and (3) the mitotic forms, which in normal glands do not occur frequently other than in the beginning portion of the excretory duct, but which are found here in the secretory portion of the glands, more particularly in the region of the infiltrate, and which possibly point to an irritated condition of the glandular epithelium.

The anatomic substratum of the Fox-Fordyce disease is thus an inflammation in the region of the apocrine glands.

PATHOGENESIS OF FOX-FORDYCE DISEASE

The pathogenesis of the condition itself is, to be sure, not fully explained by the foregoing statements. An exogenous etiology (microorganisms), though not likely, cannot be absolutely rejected. The apocrine glands furnish an entirely specific secretion, and it is not impossible that similar to *Demodex folliculorum* found in the secretion of the sebaceous glands, some parasite may find the most favorable conditions for its existence in the secretion of the large sweat glands. There is, to be sure, no particular factor that would support such an assumption, and the failure of roentgenotherapy, to which microorganisms in general show little resistance, argues rather against it.

Much more probable is the assumption that my cases involve a dysfunctioning of these glands, though, for the time being, there is no evidence to show whether such dysfunctioning finds its expression in qualitative or in quantitative changes of the secretion or in both.

Before speaking of dysfunction, we must get clearly in mind what the function of these glands is, as far as that is possible at the present time. Schiefferdecker regards these glands as odoriferous organs, which by their varying formation and by the varying quality of their secretion constitute the cause of the different odors emitted not only by the various races but also by various persons. The hairs with which these glands are always connected act as *"Duftpinsel"* or transmitters, and enlarge the vaporization area of the secretion and thus increase its range of action. In advance of Schiefferdecker, Wälsch identified the odor of the secretion of these glands with the characteristic odor of menstruating, pregnant and nursing women. He places the glands in the group of the secondary sex characters, a conception which is supported by the aforementioned researches of Löschke and by the fact that these glands do not develop until the time of puberty, along with the other secondary sex characters.

The glands are, therefore, closely associated with the reproductive organs, and have apparently the function of announcing, as it were, certain processes in those organs (the erotogenic effect of the odor is well known), and thus increasing the probability that the reproductive organs will be called on to fulfil their mission. A similar phenomenon

is presented by the vegetable kingdom, for here also the fragrance of the blossoms serves to promote propagation.

Speaking generally, there is an endosecretory connection between the function of the reproductive glands and that of the odoriferous glands. A disturbance of the former may bring about a disordered condition of the latter. However, the disturbance of the function of the reproductive glands does not necessarily find its outward expression in visible symptoms, and especially after menstrual disturbances it is in most cases a vain task to try to find an outward indication. Nor in the first of my patients were there any outward signs, and it was only by my questioning that the patient came to observe during menstruation the exacerbation of the itching in the affected places.

The assumption of a dysfunction of the odoriferous glands offers also an adequate explanation for the other symptoms of the Fox-Fordyce disease. A mere quantitative increase of an otherwise normal secretion would not suffice to explain the accompanying inflammatory manifestations and the itching, and, furthermore, these patients did not present an increase of the peculiar odor which is readily noted by persons with a delicate sense of smell. It will be easily comprehended, however, that a qualitative change in the secretion might serve as a cause of inflammation. This might lead later to acanthosis, parakeratosis and to the formation of a horny obstacle blocking the glandular orifice, which would cause a stoppage of the secretion in the excretory duct.[4] The stoppage of the secretion would explain why, during periods of more marked secretion, for example, during menstruation, the secretion fluid passes through the walls of the excretory duct and penetrates the contiguous tissues, evidence for which is found apparently in the torn and slightly swollen connective tissue fibers in the upper corium layers and likewise in the greater difficulty of staining the connective tissues. That doubtless causes an increased pressure on the nerve endings, which would explain the increased itching coincident with menstruation. The itching leads to scratching, which in turn expedites the flow of the secretion in that it removes the horny obstacle that blocks the excretory duct, and possibly pulls out the hair in the follicle. The freer flow of the secretion may relieve the itching in a measure.

While the assumption of a secretory disturbance explains the clinical and pathologic phenomena of the Fox-Fordyce disease, the question as to the cause of the disturbance is still unsettled. The disease is rare, even though we assume that it is frequently wrongly diagnosed and falsely designated as a "neurodermatitis." It is rare not only in the

4. A dilatation of the excretory ducts has been noted by several authors. A dilatation of the tubes, owing to the fact that their caliber changes normally from time to time, is difficult to establish.

absolute sense, but also in comparison with the frequency of hormonal disturbances in the region of the reproductive organs in which the symptoms of the Fox-Fordyce disease are lacking. It is not impossible that constitutional factors play a part in its causation. For such an opinion we find a certain amount of presumptive evidence in Schiefferdecker's researches. Schiefferdecker investigated the number and distribution of the apocrine glands in various mammals, apes and human races, and was able to establish in his experimental subjects a descending ratio extending from more primitive mammals to the apes, Australian aborigines, Chinese and negroes of Cameroons, down to the German woman and finally to the German man. Of the races investigated, the Australian native had the most and the German the fewest apocrine glands. Within the individual races, a predominance in the female sex is probable, although this was demonstrated only with respect to Germans. It is possible that the different development of the glands disposes certain races more and others less to this condition, and that in mixed races, in which two different kinds of predisposition are in conflict, as it were, the disposition is still further accentuated. The more frequent occurrence, apparently, of the condition in America, where mixed races are more common, may serve to strengthen such an assumption. Unfortunately, in previous accounts of the disease there have been no statements on the racial origin of the patients, so that this hypothesis has, thus far, no other support than the observations in my own cases.

SUMMARY

I have reached the conclusion that the Fox-Fordyce disease constitutes a systemic condition of the apocrine sweat glands, having found that the occurrence of this disease in man is associated with the most common localization of such a condition (axillary cavity, areola of nipple, pubic region). Also, the histologic picture shows the inflammatory manifestations localized in the region of the apocrine sweat glands. The more marked development of these glands in woman explains the greater incidence of the condition in the female. It is possible that a mixture of different races constitutes a basis for an increased disposition. As the cause of the condition, a secretory disturbance in the region of the reproductive organs may be postulated. Organotherapy, consisting of the administration of ovarian and corpus luteum preparations, was distinctly successful in the two cases reported, and relieved the patients of their terrible suffering which, up to that time, no form of therapy had been able to combat.

It appears to me, therefore, that the recognition of the pathogenesis of Fox-Fordyce disease suggests at once an effective remedy. Great credit is due to the two American investigators whose admirable clinical

insight, before a knowledge of the pathogenesis had been reached, enabled them to recognize the clinical picture of the disease as that of an independent morbid entity, as a result of which it has been taken out of the neurodermatitis group, to which it is still falsely assigned by a number of authors.

It is of interest to note how uncertain opinion was with reference to the connection between Fox-Fordyce disease and the apocrine glands. In reply to my request for material from his case, Kiess [5] wrote me, April 20, 1925, as follows: ". . . as I myself am interested in new material (apocrine glands, Schiefferdecker), I will send you some at once of the case mentioned," and Fischer [6] (Cologne) published a preliminary report in which he refers to the relation of the Fox-Fordyce disease to the apocrine glands, and calls attention to the localization, to the predominating incidence of the disease in the female sex and to the accentuation of the itching during menstruation. He regards, to be sure, the changes around the excretory ducts of the sweat glands and the follicles as the anatomic basis of the condition, whereas, according to my findings, those changes are more of a secondary nature, and the clinical picture of the disease is determined primarily by the inflammatory changes in the region of the glands themselves.

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5. Kiess: On the Fox-Fordyce Disease, Dermat. Wchnschr. **78**:1, 1924. Finsen: Dermat. Ztschr. **44**, no. 6. Freund: Gior. ital. d. mal. ven. **65**:626, 1924.

6. Fischer: Dermat. Wchnschr. **80**:821, 1925.

FOX-FORDYCE DISEASE ASSOCIATED WITH HYPERTHYROIDISM

REPORT OF A CASE

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During the past two years, I have had under observation a case, the outstanding characteristics of which have been a chronic, itching, papular eruption involving the axillae, the pubic region and the breasts. Clinically and histologically this is undoubtedly an example of the rare condition originally described by Fox and Fordyce in 1902.[1]

Since the original description of this disease, about thirty cases have been reported. Although most of these cases have occurred in neurotic women, some of whom were anemic and poorly nourished, and Whitfield's case was of the visceroptotic type with a colitis and digestive disturbances, in the majority of the cases there were no findings which adequately explained the neurotic condition. For this reason the association of this rare condition with hyperthyroidism in the case reported here is of sufficient interest to warrant placing it on record.

CASE REPORT

History.—A woman, aged 21, unmarried, came to the Cleveland Clinic on June 4, 1923, complaining of a growth in her nose, which had first been noticed in April, 1921, and which had recurred repeatedly in spite of two operations and repeated cauterization.

The family history was negative, and the patient had always enjoyed good health until the onset of this illness in 1921. The menses had started at the age of 14, and had been normal.

The patient was first referred to the nose and throat department, where the following note was made: "The face is deformed, the inner canthus of the right eye being crowded out producing a fulness of the right lacrimal region. In the nostril, there is a hard growth springing from the site of the right inferior turbinate and extending upward and backward to the ethmoid region. The growth fills the nostril leaving no breathing space. It is movable, and a probe can be passed around the lower border. There is considerable bleeding on manipulation. In the nasopharynx there is a rather round, purplish-red mass similar to the mulberry type of enlargement so often seen at the posterior tip of the inferior turbinate, but of a different color. It is impossible to state whether it is a part of the inferior or middle turbinate."

A roentgenogram of the sinuses revealed dense infiltration in the right antrum with some cloudiness of the right frontal and ethmoid sinuses. There was no evidence of bone destruction.

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1. Fox, H., and Fordyce, J. A.: Two Cases of a Rare Papular Disease Affecting the Axillary Region, J. Cutan. Dis. **20**:1, 1902.

Fig. 1.—Fox-Fordyce disease. Papular eruption in right axilla, with total alopecia.

As the result of radium combined with surgery the patient has been comparatively free from the nasal condition, although on July 9, 1925, there was some evidence of a recurrence on the naso-antral wall.

The diagnosis of the tumor made by different pathologists varied somewhat. Dr. A. S. Warthin of Ann Arbor to whom a portion of the tissue was sent stated that the tumor was either a neuroglioma or a neurosarcoma and that it would be difficult to state its exact nature more definitely. He said further

Fig. 2.—Type and arrangement of lesions on breast.

that the nerve tissue presented in the tumor suggested the presence of a "congenital defect either in the base of the brain or in some portion of the face apparently having some communication with the brain tissue. This type of growth rarely metastasizes to the body, and is seldom seen in the nose. It is usually seen in one eye and metastasizes along the optic nerve to the opposite eye." No such defect could be discovered in this case. The growth was of an unusual type, and this phase of the case may later be reported in detail by Dr. J. M. Waugh.

The patient was referred to me because of recurrent furunculosis of the axillae. Besides the furunculosis she presented the chronic papular eruption which forms a basis of this report.

In December, 1923, a papular eruption appeared in the right axilla. Under careful questioning, the patient insisted that the eruption had not been preceded by itching, although it was accompanied by intense itching. In March, 1924, the left axilla was similarly affected, and in a short time the pubic region became involved. Nine months after the onset the breasts began to show lesions, but up to the present date no other regions have been invaded. The itching was intense and paroxysmal. It was usually worse at night, so that it was impossible for the patient to get a good night's rest. She had never been of a nervous temperament, but she had become increasingly irritable because of the itching and the inability to sleep.

Before the onset of the condition, there had been hair in the axillae and on the pubes, but it was of only half the normal thickness. Since the onset of the eruption the hair of the axillae had gradually disappeared, until there was almost total alopecia in these folds. The scalp, eyebrows and eye lashes were unaffected.

She had always perspired in the axillae, but never sufficiently to soil her dress. Perspiration augmented the itching.

Physical Examination.—The patient was a well developed and well nourished young woman. She was slightly nervous but not neurotic. In addition to two furuncles in the left axilla, there was a papular eruption involving both axillae and breasts and the pubic region. The lesions, which were hemispherical in shape and of firm consistency, were fairly uniform in size; they were small, smooth, shiny and firm, and varied in color from pink to that of the normal skin. Some were umbilicated, while others seemed to contain small white puncta at the apexes. There were no plugs, but an occasional papule had a very small scale on its surface; the majority, however, were smooth and shiny. In the central portion of the axillae the papules almost touched each other, but nowhere did they coalesce.

The hair was sparse, there being only about a dozen short hairs in each axilla. Each hair pierced a papule, usually at the center but sometimes at a slightly eccentric point. The skin of the axilla was slightly pigmented. The lesions on the breasts were similar to those in the axillae and pubic region, but were slightly larger and of a deeper red, becoming less inflammatory with age and eventually assuming the uniform size and color seen in the other affected areas. The lesions on the breast were not as numerous or as closely placed as those in the axillae. They were arranged around the circumference of the areola of the nipple, a few being within the areola.

Laboratory Findings.—Urinalysis was negative. The blood findings were: red blood cells, 4,440,000; white blood cells, 6,500; hemoglobin, 85 per cent. The differential count showed polymorphonuclears, 69 per cent.; small lymphocytes, 28 per cent.; large lymphocytes, 3 per cent. The Wassermann and Kahn tests were negative. The blood chemistry findings, four and one-half hours after a meal, were: sugar 118, urea 51 and uric acid 1.7 mg. per hundred cubic centimeters.

Histopathologic Findings.—Two papules from the right axilla and one from the right breast were removed for biopsy, many sections of each block of tissue being made. The papules taken from the axilla were older than the one from the breast, the latter being larger and more inflammatory.

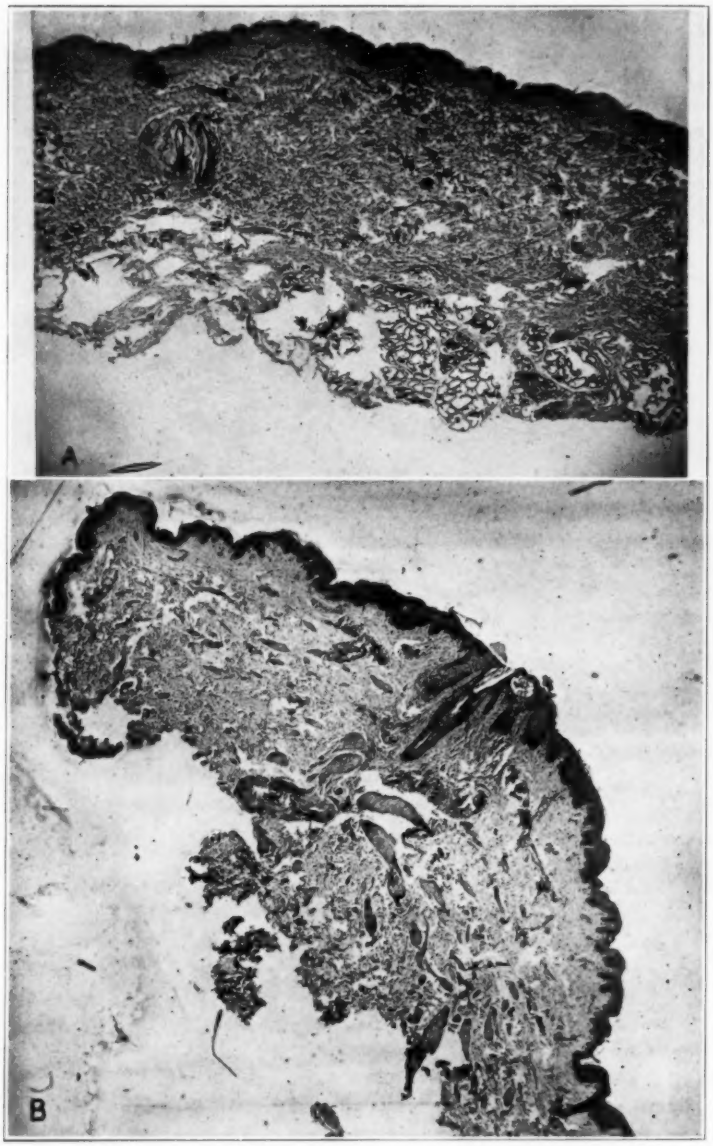

Fig. 3.—*A*, section of axilla showing changes in coils of sweat glands; × 13.5. *B*, section from breast showing later and more inflammatory papules; × 20. Note changes around follicle and inflammation in corium.

In the epidermis of the axilla there was little hyperkeratosis and no parakeratosis. The granular layer was intact and consisted of from one to two layers of cells. The rete mucosa was acanthotic, especially around the hair follicles. There was some intercellular and intracellular edema, with some ballooning of the cells. A few of the follicles were filled with a hyperkeratotic plug, which extended well down into the acanthotic portion of the epidermis. There was no invasion of white blood cells.

The papillary and subpapillary portions of the corium showed some dilatation of the vessels and lymph spaces, with some perivascular infiltration with small round cells. This cellular infiltration was most marked around the hair follicles and vessels in the corium proper, in some places forming definitely localized areas of chronic inflammation, which was mostly perivascular. The infiltration consisted chiefly of lymphocytes.

The most striking changes in the section were found in the deep convolutions of the sweat glands, in which there was marked degeneration of the lining cells. The degeneration apparently started as a vacuolization of the cytoplasm, with subsequent disintegration of the cells. This process of degeneration as observed in the various convolutions varied from early changes in the cytoplasm to complete parenchymatous degeneration, terminating in markedly dilated spaces surrounded by only the basement membrane. Many of the dilated convolutions contained casts. Some of the sections showed areas of round cell infiltration about the vessels adjacent to the convolutions. The histopathology of the lesion taken from the breast was essentially the same as that of the papule from the axilla as described above; however, the perivascular infiltration in the corium and the edema of the epidermis were more marked. A number of the sections contained small epidermal vesicles adjacent to the follicles. This difference in the histologic appearances of the two lesions was in accord with their clinical characteristics, as the one from the breast, as stated above, was of more recent development, being larger and of a brighter red than those from the axilla.

Sweat glands were not present in the sections from the skin taken from the breasts; there was, however, a small amount of lymphocytic infiltration around a few of the sebaceous glands.

Subsequent Course.—The patient was seen at rather irregular intervals, usually coming in for the care of a furuncle in the axilla which always responded well to roentgen-ray therapy; but the roentgen ray did not influence the itching or the papular eruption. Sedatives with various antipruritic preparations, including that advised by Whitfield, were prescribed; but the patient was not relieved by their use; on the contrary, the itching became more severe, and the patient became more irritable and nervous. Because of the increased irritability and the fact that although she did not present the typical eye signs of hyperthyroidism, she had become very nervous and had a definite tremor of the hands and a pulse rate of 118, she was advised to have a basal metabolism test. This was made on March 31, 1925, when the basal metabolism rate was plus 95. At this time the itching was intense.

On May 28, 1925, a thyroidectomy was performed by Dr. Robert Dinsmore. The gland, which was moderately enlarged, the right side being slightly larger than the left, showed definite hyperplasia with a few adenomatous nodules. Both lobes and the isthmus were removed, leaving a margin of tissue for the protection of the parathyroid glands and the recurrent laryngeal nerves, and for the maintenance of the normal thyroid balance.

On Sept. 28, 1925, four months after the thyroidectomy, the basal metabolism rate had fallen to plus 25; the pulse rate was 82 and the blood pressure, 160

Fig. 4.—Section from axilla showing degeneration in convolutions of sweat glands; × 240.

systolic and 100 diastolic. The paroxysms of itching were occurring less frequently, and the nervousness had decreased.

On Oct. 12, 1925, the basal metabolism was + 24, and on Oct. 22, 1925, when last seen, the patient had gained in weight, was not troubled with nervousness and was sleeping well. She was not troubled with itching, except when she had had an unusually busy day, and then the paroxysms were not severe. The papules were much smaller. She still had a basal metabolism rate suggesting hyperthyroidism, but by medical measures this may become corrected.

REVIEW OF LITERATURE

The literature on this disease has been reviewed in this country by Knowles and Hart-Drant [2] in a recent article in which they report the observation of two cases. To the cases which they have collected should be added cases recorded by Kiess,[3] Karwowski and Dobak,[4] Fox,[5] Freund,[6] Sweitzer,[7] Williams,[8] and Beinhauer.[9]

There is a definite uniformity in the reported clinical and histologic accounts of these cases. With the exception of one case, the patients have been women, usually of a neurotic temperament. The eruption has been papular, the lesions being small, discrete and uniform in character. Symmetry of distribution has been a noticeable characteristic, the axillae and the pubic region being involved usually and occasionally the breasts and umbilicus. Loss of hair in the axillae has also been a constant finding. The itching is usually paroxysmal and intense, and in most of the reported cases, antedated the eruption; however, this point was not mentioned in several cases. Treatment has been more or less useless. Fordyce [10] reports relief from surf bathing; Brown [11] obtained

2. Knowles, F. C., and Drant, P. H.: Chronic Itching Papular Eruption of Axillae and Pubes (Fox and Fordyce), Arch. Dermat. & Syph. **10**:478-486 (Oct.) 1924.

3. Kiess, O.: Fox-Fordyce's Disease, Dermat. Wchnschr. **78**:1-9, 1924; abstr., Arch. Dermat. & Syph. **10**:525 (Oct.) 1924.

4. Von Karwowski, A., and Dobak: Case of Fox-Fordyce Disease, Arch. f. Dermat. u. Syph. **148**:76-81, 1924.

5. Fox, H.: Fox-Fordyce Disease; Presentation of Case, Arch. Dermat. & Syph. **10**:382, 1924.

6. Freund, E.: Clinical and Histologic Dermatosis of Fox-Fordyce, Gior. ital. d. mal. ven. **65**:1636-1669, 1924; abstr., Arch. Dermat. & Syph. **11**:389 (March) 1925.

7. Sweitzer, S. E.: Fox-Fordyce Disease, abstr., Arch. Dermat. & Syph. **11**:544 (April) 1925.

8. Williams, C. M.: Fox-Fordyce Disease, abstr., Arch. Dermat. & Syph. **12**:284 (Aug.) 1925.

9. Beinhauer, L. G.: Fox-Fordyce Disease, abstr., Arch. Dermat. & Syph. **12**:572 (Oct.) 1925.

10. Fordyce, J. A.: A Chronic Itching, Papular Eruption of the Axillae and Pubes; Its Relation to Neurodermatitis, J. Cutan. Dis. **27**:187-191, 1909.

11. Brown, M.: The Roentgen-Ray Treatment of Various Dermatoses, Arch. Dermat. & Syph. **11**:764-767 (June) 1925.

Fig. 5.—Section from axilla showing acanthosis and keratotic plug in hair follicle; × 240.

some relief with the roentgen ray, but other observers have not been so fortunate.

Little has been added to the histologic observations of Fordyce, in which he recorded: (1) hyperkeratosis involving the sweat duct orifices, their intra-epidermic portions, and the orifices of the hair follicles; (2) acanthosis surrounding the altered sweat ducts and hair follicles; (3) mechanical dilatation of the sweat glands, with degeneration of their epithelial lining; (4) inflammation of a chronic character in the corium. Haase noted hyaline degeneration of the arteries with an altered staining quality of the elastic tissue. The change in the convolutions of the coil glands is the most marked and characteristic histopathologic appearance which has been noted in this condition. Fordyce and Whitfield [12] consider that the condition is the result of mechanical obstruction of the coil ducts, while Haase [13] thinks that the degeneration with subsequent dilatation may begin in the gland and that all other changes are secondary.

In his second paper, Fordyce reports his belief that this disease is a variety of the neurodermatitis of Brocq. With this view Haase and Withers [14] are inclined to agree. So far as the itching antedates the eruption, it is similar to neurodermatitis; however, neurodermatitis usually is not symmetrical, and is more frequently seen in areas other than the axillae and pubes, and neurodermatitis is characterized by the lichenified plaque in contrast to the discrete papules of this disease. In neurodermatitis, the histologic appearance is similar to that seen in these cases except for the lack of changes in the coil glands which is the most characteristic feature of this disease. Whitfield comments on the similarity in distribution of this eruption and that of acanthosis nigricans, but this is the only similarity between these two conditions.

Because of the low blood pressure in his case, Whitfield suggests that this disease could be considered as possibly due to suprarenal exhaustion. He administered pluriglandular therapy but had not observed the case long enough to draw conclusions as to its value.

COMMENT

It is obvious from the foregoing discussion of the literature that the exact cause of this disease is unknown, although it has been considered that some endocrine dysfunction is an etiologic factor. The occurrence of this syndrome associated with hyperthyroidism and the relief of the

12. Whitfield, A.: Fordyce-Fox Syndrome, Brit. J. Dermat. **35**:393-398, 1923.

13. Haase, M.: A Chronic Itching Papular Eruption of the Axilla, Pubes and Breast, J. A. M. A. **66**:174-177, 1911.

14. Withers, S. M.: Chronic Papular Itching Eruption of Axillae and Pubes, Arch. Dermat. & Syph. **1**:8-14 (Jan.) 1920.

symptoms following thyroidectomy are significant observations in the case here reported.

Unfortunately, however, we do not know whether the hyperthyroidism preceded or followed the appearance of the eruption. However, the course of the disease strongly suggests that the hyperthyroidism began first. The appearance of the eruption, and the paroxysms of itching, associated with irritability, the gradual increase in severity of all the symptoms, and the corresponding decrease in the symptoms following thyroidectomy seem to justify the conclusion that the thyroid toxicosis was probably the basic etiologic factor in this case.

Hyperthyroidism occurs much more frequently in women than in men and is often insidious in its course, becoming severe without producing the cardinal symptoms which are usually considered to be characteristic of this disease. Many patients are diagnosed as neurotic when in reality the nervous condition is due to hyperthyroidism. In recent years the basal metabolism rate has become a useful means of establishing the correct diagnosis in many neurotic cases.

The frequency with which the Fox-Fordyce syndrome has been seen in women closely parallels the incidence of hyperthyroidism; although the neurotic condition of the patients has been one of the characteristics of the disease, the reports in the literature have been almost wholly confined to the dermatologic condition, no data being given, however, which would rule out hyperthyroidism. The fact that the patients have been neurotic women makes it probable that some of them were in reality suffering from hyperthyroidism; assuming this to be the case, it is not surprising that they have resisted all local therapeutic measures.

The occurrence of the eruption in the axillae and the pubic region with the augmentation of the itching by perspiration supports the view that hyperthyroidism may be a factor in these cases, as these are areas in which the perspiration is increased in the latter condition.

In the case which I have reported, the eruption did not disappear as rapidly as was expected, but there was a definite decrease in the size of the papules; and excorciation, and other evidences of scratching have disappeared. Because of the changes in the convolutions of the coil glands, we would expect a much slower involution than usually occurs in a purely inflammatory lesion. Therefore the relief of subjective symptoms following thyroidectomy is of more significance than the slow involution of the eruption.

It is obviously impossible to draw definite conclusions from the observation of one case, but the rarity of this condition precludes extensive observation by any one person.

Knowles and Hart Drant have clearly expressed the opinion which I have formed concerning this rare disease. They conclude:

> This disease, therefore, is apparently a separate entity, and a suggestion as to causation seems to be that some derangement of the endocrine system has caused an alteration in the sweat secretion with dilatation of the sweat ducts and degeneraion of their walls, in axillae, pubic region and occasionally elsewhere, and the irritation from altered sweat has secondarily caused acanthosis and hyperkeratosis.

The clinical course of cases reported in the literature and the observations in this case suggest that the endocrine derangement may be a hyperfunction of the thyroid gland. In this case thyroidectomy apparently removed the toxin from the sweat with the subsequent relief of the itching which had previously resisted all therapeutic measures.

CONCLUSIONS

A case of Fox-Fordyce disease associated with hyperthyroidism is reported.

Only by careful study of these cases shall we be able to determine which systemic disturbances contribute to its causation. The condition is apparently more than a local cutaneous disorder.

CARDIOVASCULAR DISEASE AS A COMPLICATION OF GENERALIZED NEUROFIBROMATOSIS

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The possibility of cardiovascular disease as a result of vagus and sympathetic involvement is not an original idea of ours, but there are no cases reported in the literature in which the authors considered this possibility seriously. At necropsy the vagi and sympathetics are frequently found to be involved by neurofibromas in patients that during life had been afflicted with von Recklinghausen's disease. The most extensive postmortem studies of generalized neurofibromatosis show that the vagi are the most frequent of the cranial nerves to be involved, but when involved the tumors are usually outside the dura. Céstan states that involvement by neurofirbomas could cause death by tachycardia, vomiting, difficulty in swallowing and consequent aspiration pneumonia. Healy's [1] case, which showed tachycardia (90-120), a high grade optic neuritis with a mottled paleness in the center of the exudate and the insensitive cornea is the nearest counterpart to case 1 (which report follows) that we found in the literature.

REPORT OF CASES

CASE 1.—H. M., a white man, unmarried, aged 32, a factory worker, admitted to the medical service July 9, 1925, complaining of "feeling bad," about one year before began to "just feel bad," but he had no pain. Since May, 1925, he had had tinnitus, dry cough and progressive failure of vision. A week before coming to the hospital, his legs began to ache. Recently there has been vomiting, which has had no relation to the time or kind of food eaten.

Eight years before, a pterygium was removed from his right eye; tonsillectomy was performed. In 1917 he was refused enlistment in the navy on account of poor vision and the subcutaneous nodules. In 1918, while in the Argonne, he was gassed with mustard gas; a few months later, he developed mumps. Recovery from both was uneventful. Four years ago, he had two tumors removed from the inner side of the right knee, because they became so large that they interfered with walking. He had noticed puffiness under both eyes for several years. The "knots" and "warts" over his body had been present as long as he could remember, but had become more numerous during the past few years. There was no history of genito-urinary disease, nocturia or polyuria.

His mother died of cancer of the breast. She also had tumors, large "freckles" and peculiar "warts" over her body. The family history was otherwise unessential.

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1. Healy, W.: Peripheral and Intracranial Neurofibromatosis, J. A. M. A. **52**:945-947 (March 20), 1909.

Physical Examination.—The personality was that of a slothlike person whose mentality was limited. He talked slowly and seemingly with some effort. His height was 65 inches; his weight, 115 pounds (52.1 Kg.); temperature, 98.3 F.; pulse, 106; respirations, 18. Over the entire body except the palms and soles there were numerous tumors of the molluscum fibrosum type; over the thorax and arms there were several irregular blotches of pigmentation, and over the back were pigmented nevi. There was a neuroma of the ninth intercostal nerve in the midscapular line. There was some puffiness under both eyes, which on palpation was found to consist of small, soft, freely movable, subcutaneous tumors; there was also one of these tumors under the lower border of the left eyebrow. There was general weakness of the ocular and facial muscles, a slight internal squint of the left eye, and the corneas were insensitive. The pupils reacted normally to light and during accommodation. The lungs were clear. The heart was slightly enlarged; the left border of cardiac dulness was in the sixth interspace just outside the midclavicular line; the right border was in the fourth interspace 4 cm. from the midsternal line. The aortic second sound was accentuated; there were no murmurs; the brachial arteries were distended and tortuous, but little, if any, thickening was made out. The blood pressure was 260 systolic, 170 diastolic. The liver was palpable one fingerbreadth below the costal margin. Superficial and deep reflexes were active. Ophthalmoscopic Examination: The fundi showed many small areas of retintis and a few small hemorrhagic spots. Vision was 20/50 in the right eye, 20/30 in the left eye. The nerve heads appeared normal.

Laboratory Findings.—There was no serologic evidence of syphilis before and after provocative administration of arsphenamine. Urinalysis revealed: specific gravity 1.028, no sugar, albumin or casts (two or three times albumin and sugar were found in small amounts). Phenolsulphonphthalein given intramuscularly resulted in a 71 per cent excretion within two hours. The blood chemistry was within normal limits. The Mosenthal urine concentration test showed: total amount (24 hours) 1,450 cc.; 10 p. m. to 6 a. m., 400 cc.; the specific gravity ranged from 1.015 to 1.022; the chemistry was normal. Roentgenograms of the lungs, heart, great vessels and mediastinum showed nothing unusual. Heart, right margin 4 cm., left margin 10.2 cm., lung fields 27 cm. Blood examination revealed: hemoglobin 80 per cent (Dare); the total red blood cell and white cell counts were within normal limits. The differential white blood cell count was not remarkable. The feces showed no ova or parasites.

A sugar tolerance test was made with the results given in Table 2.

A tumor was removed from the extensor surface of the left arm under local anesthesia. Sections showed the epithelium to be markedly atrophic with a firm encapsulated fibrous tumor extending from deep in the corium up to the basal cells. The tumor consisted of extremely dense fibrous tissue so interlaced as to obliterate all other structures. No definite nerve fibers were seen.

In this case we determined the effect of atropine on the pulse rate. The patient was kept in bed and allowed to have no breakfast on the morning of the determination (table 1).

Tests made on the urine for sugar were negative. Epinephrine was obviously contraindicated in this case.

The patient has complained of dryness of the nose and mouth, otherwise his physical condition has remained about the same.

Case 2.—W. C., a white man, married, aged 31, a farmer, was admitted to the medical service, April 9, 1925, with the complaint of "shortness of breath." About one month ago he began to have shortness of breath. He consulted a physician

and was told that his heart was bad. During a few days before admission there had been attacks of "palpitation." There had been no cough or pains in the chest. In childhood the patient had had measles, mumps and whooping cough. He had pneumonia in 1916 and gonorrhea in 1920. There had been no symptoms of primary or secondary syphilis. There was no history of tonsillitis, chorea or acute rheumatic fever. His brother had "moles" and peculiar tumors over his body like those of the patient. The family history otherwise was unessential.

Physical Examination.—The patient was mentally alert and somewhat apprehensive about his condition. His height was 67 inches; weight, 145 pounds (65.8

TABLE 1.—*Pulse Rates Before and After Administration of Atropin*

	Pulse Rate (Radial)
8:00 a. m.	88
8:30 a. m.	90
8:45 a. m.	90
9:00 a. m.	92
Atropine given, 1/100 grain. Subcutaneously	
9:10 a. m.	90
9:20 a. m.	92
9:30 a. m.	88
9:40 a. m.	90
9:50 a. m.	92
10:00 a. m.	94
10:20 a. m.	92
10:40 a. m.	94
11:00 a. m.	92
11:30 a. m.	90
12:00 mid.	92
Atropine given, 1/100 grain. Subcutaneously	
12:10 p. m.	90
12:20 p. m.	90
12:30 p. m.	92
12:40 p. m.	90
12:50 p. m.	90
1:00 p. m.	92
1:10 p. m.	92
1:20 p. m.	90
1:30 p. m.	92
1:40 p. m.	94
1:50 p. m.	90
2:00 p. m.	82

TABLE 2.—*Results of Sugar Tolerance Test*

	Mg. per 100 Cc Blood
Blood sugar before giving glucose	92
First half-hour	180
Second half-hour	200
Third half-hour	160
Fourth half-hour	140
Fifth half-hour	107

Kg.); temperature, 98.3 F.; pulse (radial), 88 and totally irregular; respirations, 20. The mucous membranes were of a fair color. There was no cyanosis. Over the entire body except the palms and soles were numerous tumors of molluscum fibrosum type. Over the thorax and arms were blotches of brown pigmentation. The epitrochlear and inguinal lymph nodes were palpable. Extra-ocular movements were normal. The pupils reacted normally to light and during accommodation. The ears were large and prominent. The nasal septum was slightly deflected. There was marked pyorrhea alveolaris. The tonsils did not appear to be diseased. No abnormalities were elicited in the lungs. The heart was enlarged to the left; the left border of the heart in the fifth interspace was 1 cm. outside the midclavicular line. The sounds were totally irregular, but no murmurs were

elicited. The radial pulse was 88, while the pulse at the apex was 128, a deficit of 40. The abdomen was normal. There was no edema of the extremities. Superficial and deep reflexes were normal. The fundi were normal on ophthalmoscopic examination.

Laboratory Findings.—There was no serologic evidence of syphilis. Repeated examinations of the sputum, urine and stools were negative. The hemoglobin content was 95 per cent (Talquist). The total white and red blood cell counts were within normal limits. The differential white blood cell count was normal. The electrocardiographic report was that P waves did not exist as such. In all leads fibrillary waves were seen. QRS complex in lead one was upright and low in amplitude, and in lead two S was the principal part of the complex; in lead three R was negligible. T waves were upright and of low amplitude in three leads. The conclusion was that there was auricular fibrillation. Roentgenograms of heart and lungs showed: lungs clear, lung fields 30 cm., heart M. R. 5 cm., M. L. 10 cm.

Illness and Course.—Two tumors were removed under local anesthesia for microscopic study. Sections from both specimens consisted of dense bands of interlacing, encapsulated, connective tissue. No nerve fibers or mast cells were seen.

After about a month the patient left the hospital unimproved. Rest and digitalis therapy was of no avail. The patient died on July 26. Nothing is known of the course of his illness after leaving the hospital.

HISTORICAL

The gross anatomic lesions, neurofibromas, were first described by Smith [2] in 1849. Virchow [3] determined that the tumors originated from the connective tissue elements of the nerves. Von Recklinghausen,[4] in 1882, after whom the disease was named, showed that different forms of the disease formed a histogenic unit; especially the cases with pronounced tumor formation in the skin and in which the tumors were found to develop from the nerves. In 1898, Feindel and Oppenheim [5] described what they called the "incomplete form" of von Recklinghausen's disease; Adrian, Hugel [6] and also Scholl [7] describe the "abortive forms" and Groin [8] and Bertein describe "formes fruste." In

2. Smith, R. W.: A Treatise on the Pathology, Diagnosis and Treatment of Neuroma, Dublin, 1849.

3. Virchow: Die Krankhaften Geschwulste, 1863.

4. Von Recklinghausen: Ueber die multiplen Fibrome der Haut und ihre Beziehung zu den Multiplen Neuromen, Berlin, 1882.

5. Feindel and Oppenheim: Sur les formes incomplete de la neurofibromatose, Arch. gen. de méd. **2**:77, 1898.

6. Adrian, C., and Hugel, G.: Des formes abortive de la maladie de Recklinghausen, Ann. de dermat. et syph. **7**:152, 1918-1919.

7. Scholl, O. K.: Abortive Forms of Recklinghausen's Disease, Strassberg, 1916.

8. Groin, K.: Forme Fruste of Recklinghausen's Disease, Brit. J. Dermat. **35**:362, 1923.

England, in 1909, Parkes Weber [9] drew especial attention to the occurrences of neurofibromatosis with excessive cutaneous pigmentation without superficial growths. In 1906, Brickner [10] described a type of fibroma molluscum in which the lesions develop during pregnancy and disappear spontaneously soon after delivery. Histologically these tumors are identical with the ordinary fibroma molluscum tumor. Since 1906, DeLee, Goth, Sutton [11] and others have confirmed Brickner's observations. In 1912, Brickner reported a second series of cases, and he suggests the name "fibroma molluscum gravidarum" for these cases. Smith in his original description of the disease described involvement of the gasserian ganglion. One finds little said about the centralized forms of the disease in the English and American literature. After reading reports in which the syndromes of various neurologic diseases have been duplicated by central neurofibromatosis, proved by necropsy findings, one wonders whether or not careful examination would reveal the disease more frequently than is generally thought. It is by no means an unknown thing to have the centralized form of the disease with little or no skin manifestations.

ANATOMIC CHANGES

Cutaneous and subcutaneous tumors which vary in size and are freely movable, is the most common finding. The tumors may become very large and have to be removed surgically (as in case 1). The tumors are usually most numerous over the thorax, but the palms of the hands and the soles are usually exempt. These tumors have been described on the tongue [12] and in practically every part of the gastrointestinal tract. Rarely do they appear on the eyelids, as we found only three cases of eyelid involvement [13] in our review of the literature. The orbit, however, is not infrequently involved. Tumors occurring in the eyelids and orbit are usually the "Rankenneurom" type. When this type of tumor occurs in the orbit it may involve the optic nerve and cause blindness [14] or a marked exophthalmos—the eye literally hangs on

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9. Weber, Parkes: Cutaneous Pigmentation as an Incomplete Form of Von Recklinghausen's Disease, Brit. J. Dermat. **21**:49, 1909.

10. Brickner: Fibroma Molluscum Gravidarum, Am. J. Obst. **53**:191-199, 1906.

11. Sutton: A Clinical Note on Fibroma Molluscum Gravidarum, Am. J. Med. Soc. **147**:419-423, 1914.

12. Abbott and Shattock: Neurofibromatosis of the Nerves of the Tongue, Ann. Surg. **37**, March, 1903.

13. Aubineau and Civel: Tumeur palpebrale et paralysie de la VI paire dans un maladie de Recklinghausen, Arch. d. oph. **31**:808-815, 1911. Benaky: Neurofibromatose generalisse avec molluscum pendulum de la moitre droite de la face et ptosis de l'orellie, Ann. de dermat. et syph. **5**:977-982, 1904.

14. Harbitz, F.: Multiple Neurofibromatosis, Arch. Int. Med. **3**:32 (Feb.) 1909.

a stem. The rapidly growing tumors may appear bluish red,[15] be painful and ulceration may occur. Malignant degeneration has been reported.

The second type of tumors found in about 25 per cent of all cases are the true neuromas. True neuromas are more deeply situated and are hard and freely movable from side to side but not up and down. Pulling on these tumors causes radiating pains in the course of the nerves involved.

There are many case reports on record in which the tumors were found in the central nervous system at necropsy in patients with peripheral manifestations of the disease which had never given symptoms. The elected site of the central nervous system tumors is the cerebellopontile angle,[16] so it necessarily follows that the pairs of cranial nerves to be involved inside the cranial vault are the sixth, seventh, eighth and ninth. In peripheral neurofibromatosis at necropsy the tenth is by far the most common of all the cranial nerves to be involved. The fifth comes next in frequency, none of the cranial nerves being exempt. Of the other peripheral nerves that are involved, the radial, ulnar, intercostals and sciatic are most frequently mentioned. Rarely does one find sensory or motor disturbances. The tumors may infiltrate nerves, giving them the appearance of strings of beads, or tortuous, hard, grayish cords. Mucoid and colloid formations later undergoing malignant degeneration may occur.

The second most frequent finding (found in about 80 per cent of cases) is irregular blotches of freckle-like pigmentation which are often called "birthmarks." Congenital nevi are present in about 25 per cent of cases. Elephantiasis-like formations which may be congenital are [14] found in a small percentage of cases.

The histologic structure of the molluscum fibrosum type of tumors is an unsettled question. Von Recklinghausen, Unna [17] and Kriege [18] hold that a majority are neurofibromas and spring from the connective tissue sheaths of the nerves, the vessels, the coil glands and the follicles. Unna [15] says the tumors are connective-tissue tumors with medullated and nonmedullated nerve fibers running through them. He further states that the most striking constituent of the tumor is a large peculiar

15. Unna: Histopathology of the Diseases of the Skin, New York, The Macmillan Company, 1896, pp. 843-848.

16. Christin and Naville: A propos de neurofibromatoses centrale leurs formes familiales et hereditaires; les neurofibrom des nerfs optique cas a evolution antypique diversite des structures histologique, Ann. méd. **8**:30, 1920.

17. Unna: Histopathology, Pringle, Edinburgh M. J. **49**:260, 1900.

18. Kriege: On the Relation of the Nerve Fibers in Multiple Fibromata, of the Skin and in Neuromata, Virchows Arch. f. path Anat. **108**:143, 1887.

variety of mast cell regularly distributed through the new formation. Some of these cells are surrounded by a large, red halo about two times the size of the cell, and show the same color as the granules, but in structure are spongioplasm. Crocker,[19] Virchow and Dubring think the tumors are connective tissue in structure. Neither of our cases showed the "mast cells" mentioned above.

Among the secondary changes, less reliable for diagnosis, are: psychic changes, limited intelligence, imbecility and idiocy. Malformations of the fingers and toes and cryptorchidism have been mentioned. In a doubtful way some have mentioned vasomotor and trophic phenomena, such as joint involvement, arthralgia and chills and sweating.

From 60 to 70 per cent of the cases occur in males. No age period is exempt, but the disease makes its appearance most frequently in early life, and in some cases the tumors have been noticed since early infancy. There is sufficient evidence to support the statement that acute infections, puberty, pregnancy, lactation and metallic poisoning may precipitate an exacerbation of the preexisting disease or cause the sudden appearance of the disease. There is little evidence that trauma plays any part in the production of these tumors. Virchow, Trimble and others have noted the familial and hereditary tendencies which are present in about 25 per cent of the cases.

In support of the embryonic origin of the disease the primitive mesoderm being at fault is the frequent association of mesodermal tumors,[20] sarcoma and endothelioma. Feindel aptly states concerning the etiology of the disease, "La neurofibromatose généralisée est congenitale toujours, héréditaire souvent et quelquefois familiare."

PROGNOSIS

Harbitz [14] has made the statement that the patient dies with the disease and not of it. The disease is incurable, but patients usually go along for years with no change in their condition. Several things may happen which indicate a grave prognosis: the appearance of signs of central nervous system involvement; the occurrence of malignant tumors or malignant change in the existing tumors, and ulceration in the rapidly growing tumors. In the centralized forms of the disease the outlook for life is bad. Christin and Naville's [16] figures show that a majority of these patients die before 20 years of age; none reached the age of 50.

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19. Crocker: Diseases of the Skin, Philadelphia, P. Blakiston's Son & Co. **2**: 948, 1908.

20. Rolleston, H. D.: A Case of Von Recklinghausen's Disease with a Sarcomatous Growth Involving the Brachial Plexus, Lancet, July, 1889, p. 271.

TREATMENT

The roentgen ray, radium and glandular extracts of all kinds have been tried, and all give equally discouraging results. More good has been claimed from the use of the roentgen ray than from any other form of treatment. In England some have claimed good results from fibrolysin, but the results from this treatment have not been confirmed. Surgery may be indicated when the tumors become so large that they interfere with the free use of a part (as in case 1). In cases in which the tumors involve a peripheral nerve, such as the cubital nerve in the cubital space and produce pain, the tumor may be extirpated with safety, as recurrence of the tumor is not common. In the centralized forms surgery is the only means of giving even temporary relief. The situation is usually a hopeless one which is easily seen by remembering that we are dealing with a malady that is characterized by multiple tumor formation.

SUMMARY

The points in case 1 to which we wish to call especial attention are: tachycardia with hypertension which is directly proportional to the pulse rate; little demonstrable thickening of the peripheral arteries; no evidence of kidney disease; decreased sugar tolerance and a heart rate unaffected by the administration of atropine even though other physiologic effects of the drug were obtained. The subjective complaints were "dry nose and mouth."

Especial attention in case 2 is invited to the following points: auricular fibrillation without evidence of valvular heart disease and with a negative previous history of symptoms of cardiac disease; rapid death after the appearance of cardiac symptoms and the failure to improve under rest and digitalis therapy. When the dyspnea was most marked there was no edema.

In the literature one finds many instances of neurofibromatosis reported with tachycardia; a few with bradycardia and variations in blood pressure. Usually tachycardia and hypertension are concomitant. There are other case reports in which there were variations in sugar tolerance, tremors, chills and sweating, hot flashes, disturbed distribution of subcutaneous fat, abnormalities in the growth of the hair, psychic change and flushing of the skin. Many of these symptoms have been attributed to a primary endocrine basis. Would it not be more plausible to consider sympathetic and parasympathetic involvement by neurofibromas than to indict primarily the endocrine glands, since we know that at necropsy so frequently numerous neurofibromas are found scattered along the sympathetic and vagi nerves? Will not stimulation, irritation or paralysis of the sympathetic and parasympathetic nerves produce signs and symptoms of endocrine disease?

CONCLUSIONS

Two cases of generalized neurofibromatosis with cardiovascular disease are reported, the counterparts of which we were unable to find in the literature.

The possibility that the endocrine disturbances so widely written about in this disease are a secondary complication, the primary pathology being sympathetic, parasympathetic (or both) involvement by neurofibromas is suggested as a more plausible explanation of these symptoms.

Too little is known of the exact physiologic influence of the vagi and sympathetics on the cardiovascular system for us to do more than speculate what happens when they are stimulated, irritated or paralyzed by neurofibromas. In these cases we cannot do more than suspect vagi involvement by neurofibromas in case 2 and perhaps both vagi and sympathetic involvement in case 1, as being responsible for the cardiovascular disease, which of course is just as the endocrine disturbances —one of the many complications.

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EPIDERMOMYCOSIS OF THE SOLE

CAUSED BY MONILIA AND YEAST *

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We wish to report two cases which clinically resembled, or were identical with, epidermomycosis. In neither of these, however, was there *Microsporon* or *Trichophyton;* instead, we found *Monilia* in one case, and an unidentified yeastlike organism in the other.

In most cases in which organisms of the type we found were present, the lesions occurred in portions of the body where two skin surfaces were in contact; thus, such monilia or yeastlike organisms have been demonstrated in lesions between the fingers or toes, about the anus, or under the breast in females. In a few cases lesions due to similar organisms have been reported on the flat skin surfaces. Greenbaum and Klauder [1] have recently reviewed the literature concerning yeast infections of the skin, so we shall not discuss the bibliography.

As far as we have been able to find, however, there are no reported cases of lesions on the sole produced by this type of organism.

The two cases which we have observed occurred in two men, aged about 25, and both patients presented the same clinical appearances.

The site of the lesion was the ball of the foot, about 1 inch back from the lines of the toes; the lesions were confined to this area, and only when neglected did they extend forward to between the toes.

The lesions appeared first as small vesicles, possibly from 1 to 1.5 mm. in diameter. These vesicles were rather superficial and were apparently confined to the calloused skin of the sole. As the vesicles broke down, there was a tendency for a spreading of these lesions, with the formation of a dull, yellowish, scaly area, varying in size. Since we saw the condition early, the size of the lesions was usually limited. The scales clung rather closely to the epidermis, and in no place did the scaly lesions appear to involve more than the superficial layers of the epidermis; there was no cracking of the lesions, no oozing or bleeding, but there was itching.

We believe that, on the whole, these lesions resembled the lesions of epidermomycosis.

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1. Greenbaum, S. S., and Klauder, J. V.: Yeast Infections of the Skin: Report of Cases and of Studies on the Cutaneous Yeasts, Arch. Dermat. & Syph. **5**:332 (March) 1922.

Cultures were made from the vesicles by cutting off the top and then gently scraping the interior of the vesicle with the platinum loop. In each case we obtained a pure culture of a yeastlike organism. While morphologically the two strains were almost similar, and while in many respects the cultural characteristics were alike, the two organisms were not identical.

The first of the two organisms (No. 111) was generally spherical, from 3 to 6 microns in diameter; it showed at times a slight tendency toward oval forms but was usually irregularly rounded. The majority of the organisms stained poorly if at all, with thionin or methylene blue. At times the organisms showed a faint diffuse staining, or parts of the organism showed a granular staining; a few smaller organisms stained deeply and evenly; such organisms, however, were rather exceptional. Most of them possessed a heavy cell wall.

In the hanging drop this organism persisted in a spherical form and reproduced by budding; at no time were mycelia produced, nor were spore sacs nor ascospores seen. The organisms apparently contained a nucleus, one or more vacuoles and a motile dark granule—all surrounded by a heavy cell wall.

The growth on Sabouraud's proof mediums (peptone Difco and maltose Difco) appeared as a white, opaque, raised growth, showing little or no spreading on the surface of the mediums, and no outgrowths from the edges of the growth. The surface of the growth was shiny and generally smooth.

When pour plates were made of culture No. 111 with Sabouraud's maltose agar, the organism formed a rounded colony in which the reproduction was always by budding, and in which the organism never showed any but spherical yeastlike forms. In a large number of repeated experiments, we have never been able to induce these organisms to produce mycelia.

The scanty information thus obtained was supplemented by a study of the action of the organism on various carbohydrates. This organism fermented none of the carbohydrates used with the production of acid and gas; in dextrose, levulose, galactose, saccharose, inulin, mannose and mannite mediums acid was produced; there was no action, however, on maltose, lactose, dextrine, arabinose, xylose, rhamnose, raffinose, salicin, melezitose or trehalose.

It is impossible, from the information thus gathered, to place this organism specifically—possibly for the time being it may be as satisfactory as anything else to call it a cryptococcus, in possible accordance with the classification of Castellani and Chalmers.[2]

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2. Castellani, A., and Chalmers, A. J.: Manual of Tropical Medicine, ed. 3, New York, William Wood and Company, 1920.

The second organism (No. 112) was morphologically similar to the first. We found the same spherical organisms, usually unstained, however, varying slightly in this regard, just as did No. 111. There was a markedly greater tendency in the second organism toward the appearance of oval forms. In smears of No. 112 we found a number of longer and rather thinner cells staining irregularly; these were apparently mycelial elements.

In the hanging drop we found most of the cells were oval, rather than spherical. Reproduction usually occurred by budding, but a few mycelial elements appeared in the culture, and conidia were produced on these at the junction of two articles. The mycelia were more delicate than the usual oval cells, and they were longer and thinner. At times, the oval cells remained attached at their poles and formed a chain, thus producing mycelia composed of these cell forms. Spore sacs were not seen in any culture. The oval cells contained the usual nucleus, vacuole or vacuoles and dark motile granule.

The growth of No. 112 on Sabouraud's mediums was essentially similar to the growth of No. 111, with the exception that delicate outgrowths were seen, especially toward the upper drier portion of the growth on the slant. These outgrowths corresponded with mycelial outgrowths seen in the pour plate cultures.

When pour plates were made, the colonies sent out from their edges mycelial processes, sometimes branched, or, at times, unbranched, which apparently grew in, and not on, the surface of the mediums. The mycelial processes were composed of cells of varying length, some scarcely longer than the oval cells already described, others three or four times as long. At the junction of these mycelial cells the rounded or spherical conidia occurred, forming a roset about the junction points; these conidia multiplied in situ until there were masses of these round cells scattered irregularly, in clusters, along the mycelial structure. Eventually the mycelium was entirely hidden by the conidia. We have, then, in No. 112 a typical monilia-like form of growth.

The organism differed from the one first described not only in form and in tendency to produce mycelial growth, but also in its action on carbohydrates. It attacked the carbohydrates more actively than did No. 111 and fermented dextrose and maltose with the production of acid and gas; in levulose, galactose, saccharose, inulin, dextrin, mannose, raffinose, mannitose, salicin, melizitose and trehalose it produced only acidity, and only in lactose, arabinose, xylose and rhamnose did it have no effect. Its action on dextrose, namely, the fermentation with production of acid and gas, and its cultural forms distinguish this organism as a monilia.

SUMMARY

From two cases of epidermomycosis of the plantar surface which clinically were apparently identical, we have been able to isolate different organisms in each case. In the one case we found a monilia, in the other an unidentified yeastlike organism, which may possibly be classed as *Cryptococcus*.

LICHEN SIMPLEX OF THE SCALP

ARTHUR W. STILLIANS, M.D.

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CHICAGO

Most descriptions of the symptomatology of lichen simplex mention the back of the neck as a favorite site of the disease, and note incidentally that the lesions of the neck may extend into the hairy scalp; but they neither emphasize the scalp localization nor mention the different symptomatology in this region. The fact is that the scalp localization is one of the commonest.[1] In a series of cases under my care, it was fully as frequent as the involvement of the skin of the back of the neck. Of twenty-five patients, ten, or 40 per cent, had lesions on the scalp. Four had lesions on the scalp only; in six the nape was also involved, and in two of these there were also lesions on the forearms. In four cases in the series there were nape lesions without scalp involvement.

SYMPTOMATOLOGY

In descriptions of the symptoms of lichen simplex, three zones are mentioned, an outer one of erythema or pigment, within this a zone of indistinct, rounded, pale papules and centrally a patch of infiltration with distinct cross-hatching and scanty, adherent scales. These zones are seldom easy to demonstrate, and it is sometimes practically impossible to do so. This difficulty is greater on the scalp than elsewhere. Not only are the patches sharply defined, as a rule, but their color is more pronounced than is common on the glabrous skin, usually a deep brownish red instead of the pale brown so often seen elsewhere. The most striking difference in the scalp, however, is the marked scaliness. Not rarely these patches are thickly covered with fine, adherent, grayish scales, so that the underlying color is hardly seen. Blood crusts are seldom seen, in spite of the intensity of the itching as described by the patient. The patches are one or several, oval or polycyclic or irregular, from 2 to 5 cm. in diameter, and when multiple show none of the tendency to symmetry so frequently shown by the disease on the glabrous skin.

ETIOLOGY

The paper of Ehrmann [2] and recently one by Wise and Ramirez [3] have done a great deal to clarify the question of the etiology of lichen

1. Brocq, L.: Cliniques dermatologiques, Paris, Masson et Cie, 1924, p. 317.

2. Ehrmann: Ueber den Zusammenhang der Neurodermatitis mit Erkrankungen des Verdauungstraktes und Störungen der inneren Sekretion, Arch. f. Dermat. u. Syph. **138**:346, 1922.

3. Wise, F., and Ramirez, M. A.: Protein Sensitization in Pruritus with Lichenification. Preliminary Report, Arch. Dermat. & Syph. **11**:751 (June) 1925.

simplex. They suggest the part that gastro-intestinal disease, endocrine disturbances and sensitizations play in the causation. All these may be intimately associated and inextricably mixed with nervous disturbances, so that earlier ideas on the etiology need not be cast aside entirely. Ehrmann [2] attempts to account for the frequent localization on the back of the neck and the adjacent scalp by blaming the irritation of combing and brushing up the long hair of women. This theory is not substantiated by my small series, for four of my patients were men. We cannot hope, therefore, that the present craze for short hair in women will result in a cessation of the scalp localization. The almost constant choice of the occipital region for scalp localization must be the result of local pruritus, if the mechanical theory of the causation of the lichenification is to be accepted. Other parts of the scalp itch just as frequently in ordinarily nervous people as the occipital region. It must be that in lichen simplex certain areas itch because of some internal disturbance acting on the nerves as maintained by Bukovsky.[4]

TREATMENT

The most consistently successful method of treatment of lichen simplex in my experience, is the use of the various kinds of therapeutic light. Two applications, a few days apart, of a half strength plaque of radium, unscreened except for thin rubber, for five minutes at a time will clear up some of the patches. An equally mild dose of roentgen rays will do the same. Because, however, many of the patches require more than an epilation dose of rays to eradicate them and because they recur and require a repetition of the treatment, the use of this method, so successful elsewhere, is not advisable for the scalp. Ultraviolet light, best applied by a contact treatment with the Kromayer lamp, is frequently successful; but on the scalp this must be given between the parted strands of hair, making a tedious task.

To avoid these difficulties, the procedure so successful in the treatment of alopecia areata, an alcoholic dilution of cresol, rubbed well into the patch, is an efficient measure. Beginning usually with 25 per cent, the application should be strong enough to cause noticeable burning and subsequent exfoliation. As soon as the latter result is complete, the operation should be repeated with the same strength solution, if the first exfoliation was satisfactory. If not, a stronger solution should be used, but care must be taken that extremely strong solutions be avoided until the susceptibility of the patient has been ascertained, for too strong an application can cause severe pain for several hours. Different preparations of cresol vary considerably in strength, so that it is well to get a certain brand, test it, and use only that preparation.

4. Bukovsky, quoted by Wise, F., and Eller, J. J.: Pruritus with Lichenification, New York M. J. & Rec. **118**:688 (Dec. 5) 1923.

If the treatment is strong enough the patient will report a cessation of itching for several days after it—in all probability a return of the itching after exfoliation. On examination, the patch should be less scaly and less infiltrated. Depending on the strength of the reaction, the intervals between treatments are usually from five to ten days. The patient should be impressed with the importance of returning for treatment as soon as the scaling has taken place, for the disease readily returns to its former condition if neglected. With peristent care, the patches usually clear up slowly until nothing but erythema is left and the itching has ceased. Then it is safe to stop treatment and watch for signs of recurrence. In stubborn cases which persist after full strength cresol has been used, a change to equal parts of tincture of iodine, chloral hydrate and phenol, gives further improvement. I have never failed to get results in patients who have cooperated. General measures, of course, should not be neglected, and it is to be hoped that the work of Wise and Ramirez may give us a greatly improved means of controlling these patients. Local treatment will probably always continue to be an important part of the therapy, however.

COMMENT

Of course the series of cases mentioned is too small on which to base accurate statistics. It is only desired to point out that lichen simplex often occurs in the scalp; that its symptomatology there is somewhat different from that on the glabrous skin, and that it is usually amenable to energetic, persistent treatment.

FAILURE OF EARLY ABORTIVE TREATMENT FOR SYPHILIS

REPORT OF A CASE

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The prophylaxis of syphilis, or, more properly speaking,[1] the early abortive treatment for syphilis with injection of arsphenamine a short time after exposure, has been used effectively for some time. In accord with the suggestion of Stokes,[2] the exposed person should have an injection of arsphenamine intravenously as soon as possible (before forty-eight hours) and another one twenty-four hours later. Michel and Goodman,[3] Simon [4] and several foreign observers have reported numerous successes in patients treated with repeated injections of the arsphenamines. Greenbaum and Harkins [5] have remarked on the paucity of case reports dealing with sterilization accomplished with a single injection of arsphenamine. I have had several such dubious successes, but the doubt has always persisted as to whether or not such persons were really infected.

The following case is of importance because of the failure of one injection of neo-arsphenamine to protect from syphilis.

CASE REPORT

History.—Mrs. D., a young married woman, had had repeated intercourse with her husband following his return from a trip, forty-eight hours before. The husband presented a small primary lesion under the foreskin which was found by dark-field examination to be swarming with *Spirochaetae pallidae*. He was immediately put on intensive treatment, and the wife given 0.45 Gm. of neo-arsphenamine intravenously with instructions to return the next day for another injection. She, however, immediately separated from her husband and went to live with her mother in a neighboring city.

Subsequent Course.—Six weeks later, she returned with an early maculopapular syphilid over her body, a general glandular enlargement, and a few superficial mucous membrane erosions in the mouth. No primary lesion was demonstrated, although the vagina, rectum and throat were searched.

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1. Pardo-Castello, V.: Correspondence, J. A. M. A. **76**:397 (Feb. 5) 1921.
2. Stokes, J. H.: The Application and Limitation of the Arsphenamines in Therapeutics, Arch. Dermat. & Syph. **2**:303 (Sept.) 1920.
3. Michel, L. L., and Goodman, H.: The Prophylaxis of Syphilis with Arsphenamine, J. A. M. A. **75**:1768 (Dec. 25) 1920.
4. Simon, D. L.: Use of Arsphenamine in Treatment of Individuals Exposed to Syphilis, Urol. & Cutan. Rev. **28**:201 (April) 1924.
5. Greenbaum, S. S., and Harkins, M. J.: Experimental Study of Prophylaxis of Syphilis with Arsphenamine, Neo-Arsphenamine and Sulpharsphenamine, Arch. Dermt. & Syph. **10**:409 (Oct.) 1924.

COMMENT

Since this woman denied exposure subsequent to the treatment it must be acknowledged that a single injection of a small amount of neo-arsphenamine is not always sufficient to abort infection with syphilis. In this case the time limit was up, but I cannot help but feel that had she received one or two injections more she might have escaped, especially had these injections been arsphenamine instead of neo-arsphenamine. The slight delay in the appearance of the early eruption might be explained by a depressant action of one injection of neo-arsphenamine. This meddling with the mechanism of immunity is not advisable, for it has been shown that the primary lesion plays some part in the building of resistance, and, furthermore, such illogic treatment may result in the eruption of the so-called malignant syphilids.

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Editorial

THE SERIOUS OBSTRUCTION TO PROGRESS IN MULTIPLICATION OF NAMES

In *Science*, April 16, 1926, C. L. Shear and F. E. Clements, perhaps the most distinguished authorities on mycology in the United States, say that the obstruction to the development of systemic mycology in the United States is due to the confusion of names of species and genera in this subject. They point out the great importance of mycology in many fields and the desirability of its intensive study in this country. Their comments on the obstruction to scientific progress due to the efforts of systematists to make accurate classification of species and genera are so applicable to nomenclature of medicine and of biology in general that they seem worthy of consideration here. They are particularly pertinent as respects the confusion in the nomenclature of dermatology and the name of the organism of syphilis.

"The vast number of fungi concerned, of which nearly one hundred thousand supposed species have been described, and the many pleomorphic and minute forms offer numerous and perplexing problems in the way of identification and classification."

A little changing in the wording of this would apply to the confusion arising over the duplication of names in dermatologic nomenclature. Dermatology need make no apology for its elaborate nomenclature. The clinical and other observations of dermatology are enormous in number, and names must be available to describe facts. The nomenclature of dermatology is not complicated compared with that of botany or chemistry, for example. But a strong indictment can be brought against dermatology on the ground of multiplication of names for the same fact —for the same disease, to be specific. When new generalizations are made, like Duhring's dermatitis herpetiformis, new names must be forthcoming. But we have a multiplication of modern names which strive to replace old names that have had long established usage. Take the multiplication of names, for example, that are given for the numerous variants of parapsoriasis, or the innumerable names under the tuberculids, the synonyms of acne, varioliformis, of acnitis, of folliculitis; what possible hope has the ordinary man of wading through all of these synonyms or names or variants of the same processes and coming out with any clear ideas of the distinctions between them? Indeed, the expert does well if he has their meanings sharply in his mind. One of the most important needs of dermatology is some agreement on some one

name that can be used in place of many synonyms. They constitute a real obstacle to dermatologic progress.

Shear and Clements point out the only way in which to avoid the confusion of such a situation.

Quoting them further: "Two great deterrents to students as well as to general botanists and other plant scientists, are the lack of uniformity and stability in the use of Latin names and the endless subdivision and duplication of genera and species. . . . Accompanied as this is by the constant destruction of generic and specific landmarks and by the avalanche of so-called genera and species that exist only in the mind of the describer, it is not strange that mycology languishes. . . . In view of this situation, we believe that the quickest and simplest method of securing stability and uniformity in the use of names of fungi is *to follow general usage. . . . The best usage of conservative taxonomists since the time of Linnaeus affords the only possible basis* for making mycology of definite and far-reaching service and for converting it into a real science based upon evolution and relationship." (Italics mine.)

This is the kernel of the communication, and the point which I would emphasize as of excessive importance in the nomenclature of disease and of pathologic organisms. Here are two of the most important taxonomists in the field of mycology who, surveying this field and the endless confusion that has arisen and obstructed progress from many attempts to systematize nomenclature, urge that in order to get out of the confusion the only guide is a system of classification based on best usage. Two authorities who approach the subject from the purely scientific standpoint come to the position of the lexicographers, that the only guide for nomenclature is good usage.

If we are ever going to escape from the confusion in dermatologic nomenclature, it will be by agreement on a nomenclature based on good usage. What Shear and Clements say about mycology we might very well apply to dermatologic nomenclature, paraphrasing their statement as follows: The best usage of conservative dermatologists since the days of Willan (for example), affords the only possible basis for making dermatology comprehensible, for simplifying dermatologic nomenclature, and for converting it into a real science, based on evolution and relationship.

As Prof. Barrett Wendell says, in his work on English composition, "Dictionaries and grammars, to be sure, may codify what exists at any given moment. Regarded as codes, they are invaluable; but at best they are codes of common law, not legislative enactments. The only sanction behind them is that of practice, of usage."

This is well illustrated by the attempt to substitute a less familiar name for *Spirochaeta pallida*. On the ground that the organism of

syphilis had certain differences from the spirochetes, the name *Treponema pallidum* was suggested as the name for this organism. There has been no agreement among taxonomists about the variations in the organism of syphilis which form the basis of its separation from the spirochetes. Authorities in no wise agree on these facts, and yet, on the basis of these facts, insistence is made by systematists that this organism should be called a treponeme. The systematists are even divided among themselves, and another name suggested is *Spironema pallidum*. In the meanwhile, *Spirochaeta pallida* is entrenched in the literature by long usage; whether right or wrong, the word has had almost universal use; it is written in the world's literature and cannot be gotten rid of. The efforts of systematists to substitute a new name can lead only to confusion. Everybody knows what is meant by *Spirochaeta pallida*. A good many people, even in the medical profession, have to think a second time what is meant by *Treponema pallidum* or *Spironema pallidum*—and are then not certain of the spelling. In fact, confusion and ignorance may be shown even by the elect. This is illustrated in a recent serious, supposedly scholarly, book on syphilis, in which throughout the book *Spironema* is used instead of *Spirochaeta*, but not *Spironema pallidum*, as should have been done, but *Spironema pallida*.

W. A. P.

News and Comment

LOCAL DERMATOLOGICAL SOCIETIES

MANHATTAN DERMATOLOGICAL SOCIETY

David L. Satenstein, Sec., 116 West 58th St., New York City.
Max Scheer, Chairman, 616 Madison Ave., New York City.

CHICAGO DERMATOLOGICAL SOCIETY

Paul A. O'Leary, Pres., Rochester, Minn.
F. E. Senear, Sec., 7 W. Madison St., Chicago.

NEW YORK DERMATOLOGICAL SOCIETY

A. Schuyler Clark, Pres., 614 Park Ave., New York City.
John E. Lane, Sec., 59 College St., New Haven, Conn.

NEW ENGLAND DERMATOLOGICAL SOCIETY

Henry J. Perry (deceased), Pres., 19 Bay State Rd., Boston.
Wesley T. Lee, Sec., 220 Clarendon St., Boston.

NEW YORK ACADEMY OF MEDICINE, SECTION ON DERMATOLOGY AND SYPHILIS

Mihran B. Parounagian, Chairman, 126 E. 39th Street, New York City.
George C. Andrews, Sec., 121 E. 60th Street, New York City.

MINNESOTA DERMATOLOGICAL SOCIETY

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Norman Tobias, Sec., 516 Metropolitan Bldg., St. Louis.

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Ralph A. Perkins, Sec., 276 Erskine St., Detroit.

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John H. Stokes, Pres., 3800 Chestnut St., Philadelphia.
Carroll S. Wright, Sec., 1402 Spruce St., Philadelphia.

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H. H. Hazen, President, 1912 R St., N. W., Washington, D. C.
H. M. Robinson, Secretary, 405 N. Charles St., Baltimore.

BROOKLYN DERMATOLOGICAL SOCIETY

E. Almore Gauvain, Sec., 47 Halsey St., Brooklyn.

CINCINNATI DERMATOLOGICAL SOCIETY

August Ravogli, Pres., Doctors' Bldg., Cincinnati.
H. Jerry Lavender, Sec., 715 Provident Bank Bldg., Cincinnati.

FOREIGN DERMATOLOGICAL SOCIETIES

Italian Dermatological Society.
Danish Dermatological Society.
La Société Française de Dermatologie et de Syphiligraphie.
Section on Dermatology, Royal Society of Medicine.
British Association of Dermatology and Syphilis.
Berlin Dermatological Society.
Cologne Dermatological Society.
German Dermatological Society in Czechoslovakia Republic.
Vienna Dermatological Society.
Munich Dermatological Society.
Deutsche Dermatologische Gesellschaft.

Abstracts from Current Literature

A Study of 100 Cases of Erysipelas from the Wards of the Philadelphia General Hospital. Joseph C. Doane and Ralph M. Tandowsky, Therap. Gaz. **49**:11 (Nov. 15) 1925.

The use of antistreptococcic serum in wandering or complicated erysipelas seems justified. The dosage should not be less than 100 cc. a day, and for a full effect from 300 to 400 cc. in twenty-four hours. The authors are impressed with the need for further search for the existence of a specific strain as causative in this disease.

A Simple Treatment for Cutaneous Papilloma. H. R. Houston, Edinburgh M. J. **33**:1 (Jan.) 1926.

The author treats his patients who have cutaneous papilloma by swabbing the lesions three times daily with a 1 per cent solution of liquor arsenicalis. A mild inflammation affecting the growth is produced. It is easily applied, has no detrimental effect on surrounding skin, and produces a minimum of scar tissue.

The Morbid Anatomy and Histology of Pellagra. William Susman, Edinburgh M. J. **33**:2 (Feb.) 1926.

The oldest lesion in pellagra is in the thyroid. Proliferation of the glandular vesicular epithelium, increased vascularity, intracellular edema and a marked fibrosis indicate a disease of the thyroid. The metabolic disturbances and the damage incurred by the causal agent are responsible for the liver damage and the consequent fibrosis. The toxic material is excreted by the kidney tubules, and there causes a peritubular degeneration, and later, fibrosis. The lesions in the other organs are secondary to this, the main process.

Levin, New York.

On Experimental Reinoculation of Syphilis in Rabbits. Yogoro Adachi, Acta. dermat. **4**:492 (Jan.) 1925.

1. It has been shown definitely that under certain circumstances syphilitic infection (reinfection) does take place in animals which have had syphilis and have been treated with a sufficient dose of arsphenamine.

2. The success or failure of the second infection in such rabbits depends mainly on the length of time between the period of infection (first inoculation) and the arsphenamine treatment, and not on the method and site of the inoculation and the virus strain.

3. If the therapia sterilisans is performed in the early stages of the syphilitic infection—within forty-five days after infection—reinfection occurs in 100 per cent of the cases. The percentage of the positive infection gradually decreases with the increase in the number of days, and finally no infection takes place 100 days after the first infection however thorough the treatment.

4. If the individual receives sufficient arsphenamine treatment in the early stages (within about fifty days) of the infection, the individuum may be infected with *Spirochaeta pallida* (repeatedly at least three or four times).

5. Occasionally cases (twenty-two cases) were observed, in which no second infection occurred (although they were treated with arsphenamine in the early stages of infection). On repeated reinoculation, experiments being performed several months (four or more) later, seven cases developed typical syphilitic lesions.

6. If the therapia sterilisans is performed in the later stages of the infection (syphilitic), later than three to four months, the second infection never takes place. The same also applies to the third or fourth inoculation which has been carried out several months or more than a year after the second inoculation experiment (thirty cases). Exceptions to this rule are exceedingly rare. It should be added that in such animals no syphilitic manifestation has appeared in the later course, although careful observation has been continued during a period of one to two years.

7. The characteristics of the syphilitic lesions due to reinoculation with the syphilitic virus are almost similar to those of the first infection, though the incubation period is in general a little longer (average forty-seven days, while that of the first infection averages thirty-one days).

The author believes that the "second infection" in the experiments mentioned above is true reinfection, that is, the second infection took place in the animals after complete cure of syphilis with arsphenamine treatment.

The fact that no second infection took place in a number of animals in which arsphenamine treatment was carried out in the later stages of the infection (first inoculation)—three to four months after infection—suggests the undeniable existence of immunity in syphilis.

Whether this should be considered as relative or real immunity is hard to say definitely. In all probability, it is not correct to suppose that such immune animals must always possess a certain number of active spirochetes somewhere in the body, surviving from the arsphenamine treatment.

McCarthy, Washington, D. C.

DERMATOLOGIC ABSTRACTS

The Journal of the American Medical Association

Experimental Leprosy in Monkeys. J. Reenstierna, Ann. de l'Inst. Pasteur. **40**:78 (Jan.) 1926.

Reenstierna induced leprosy in five of seven monkeys inoculated with bacilli from patients with untreated leprosy. Characteristic nodules appeared after an incubation period of from thirty-seven to forty-five days; they persisted from forty to sixty-two days. One nodule still persists up to seven months since the inoculation. The clinical course and histologic aspect of the nodules were identical with those in man. Reinoculation, made about seven months after clinical recovery, showed that there was no immunity. Emulsions of these nodules, injected in new monkeys, did not induce the disease. Several colored illustrations are given.

Improved Tuberculin Skin Test. A. Ferrari, Rev. med.-cirurg. do Brazil **33**:627 (Nov.) 1925.

Ferrari extols the ease and simplicity of what he calls his new dermoreaction for detection of tuberculosis. He pricks the skin in the same way as for tattooing. A few droplets of blood ooze out as the skin is stretched. At another point he deposits a drop of tuberculin, and repeats the pricks through it. Two minutes later he wipes off the tuberculin, and tells the patient to return in five days. The positive reaction is striking; the reddish spot may be visible for several days. When it subsides, it leaves an area of pigmentation that may linger for several weeks.

Society Transactions

BROOKLYN DERMATOLOGICAL SOCIETY

January Meeting

BINFORD THRONE, M.D., *Chairman, Presiding*

TERTIARY SYPHILIS OF THE TONGUE. Presented by DR. HOWES.

The patient said that he had had a chancre in 1882, but had received no treatment at that time. In 1913, he had had a generalized rash, probably a secondary papular syphilid, and a four plus Wassermann reaction. He had received a great deal of mercury then and ever since; his tongue had been enlarged and had felt sore. He had had no other skin or cerebral lesions. At the present time, he is sugar-free but is adhering to an antidiabetic diet.

DISCUSSION

DR. CHARGIN: I believe that we are not dealing with gumma or carcinoma, but that the process on the tongue is the end stage of syphilitic glossitis, very prone to carcinoma of course. I think that the patient should receive moderate doses of arsphenamine and mercury or bismuth, not so much with the idea of influencing the process on the tongue, which is not likely, but with the idea of treating the patient for syphilis, of which he may have active lesions elsewhere on his body. I advise against local irritants, such as smoking or irritating applications or spiced foods.

DR. ABRAMOWITZ: I think that Dr. Berkowitz' question as to the method of procedure when there is doubt about the possibility of syphilis or malignancy of a lesion in the mouth is very important. I have been asked several times by post-graduate students what is to be done when this question arises. When an actual ulcer has developed, as in this case, in conjunction with a four plus Wassermann reaction, and there are three different diagnoses made, syphilis, tuberculosis and malignancy, should the man be given antisyphilitic treatment, either arsenic or mercury or both, in order to establish or eliminate the syphilitic origin of the growth; or, should a biopsy be taken immediately and immediate action be based on the findings? It happens that a similar case was presented recently at the Tri-State Society, where it was agreed that the ulcer was syphilitic. A section was taken, and the findings were that of a prickle-cell epithelioma. In the meantime, however, four weeks were wasted while the man was being given arsphenamine. Such a procedure is wrong. Once a diagnosis of malignancy is suspected, the biopsy should be made immediately, and only the mildest antisyphilitic treatment instituted in the interval, and that for not longer than two weeks unless the lesion shows definite signs of resolution.

DR. BERKOWITZ: I heard the late Dr. Gottheil cite a case of a man who came in with a condition of the tongue similar to the one presented at this meeting, and he was given intensive antisyphilitic treatment. Within a short time he developed a carcinoma of the tongue, and died within fifteen months. Dr. Gottheil thought it was absolutely inadvisable to proceed with intensive arsenical treatment in those cases in which there is a possibility of malignancy.

DR. CHARGIN: It is common knowledge that carcinoma is likely to develop on the remains of a syphilitic glossitis. I maintain, however, that in view of

the absence of any lesion suggesting a carcinoma that the proper procedure in the case is to treat the syphilis, which may be elsewhere in the body.

Dr. Abramowitz: I feel that the important issue is not what is the most satisfactory way of treating this type of syphilis, but rather what is to be done in a case of an ulcer or even a fissure which might be syphilitic, but which is also suspiciously like a malignancy. I think that most of the men who deal a great deal with cancer are not afraid to take biopsies. They have been successful in making biopsies with the electrocautery, and there have been no dangerous results, provided, of course, that the tissues were not manipulated too much.

Lymphangioma. Presented by Dr. Skeer.

P. W., a school girl, aged 15, born in United States, appeared in the dispensary several weeks previous to presentation and showed six or eight pinhead to pea-sized vesicles, situated on the left side along the fifth and sixth ribs. The duration was one and one-half years. There was present also a stellate shaped, slightly pigmented lesion, about which the vesicles were grouped. The duration was five years. The vesicles were clear, translucent and reducible by pressure. They resembled herpetic vesicles. One vesicle was pricked with a needle and a clear exudate was seen, but the vesicle itself assumed a bright red color due to the infiltration of blood into the cavity. There were no subjective symptoms.

Nodular Leprosy. Presented by Dr. Gauvain.

F. C., a woman, married, born in Russia, aged 54, who had been in the United States for twenty-eight years, formerly a butcher, but now a housewife. Three and a half years ago, while in a hospital in Philadelphia with typhoid fever, had a nodular eruption on the face, extremities and body. She received injections of chaulmoogra oil while there from a dermatologist in that city. She presented herself here with the typical leonine facies, and nodules over the entire body. She had also had a nephritis and diabetes, but her urine at the present time was sugar-free. Nodules had formed in the eyes, and the patient had a glaucoma. One year ago the patient had an attack of erysipelas on the right side of the face; after recovery the lepra lesions in the involved area had nearly disappeared. A biopsy showed an encapsulated granuloma, having a fibrous stroma, with lymphocytes, plasma cells, epithelioid cells and occasional multinucleated giant cells. In the stroma and within the large phagocytes were clumps of acid-fast bacilli, morphologically identical with the Hansen bacillus.

DISCUSSION

Dr. Chargin: I have observed a patient suffering from macular leprosy who did very well on chaulmesterol, but I did not administer such large doses as does Dr. Graham. I gave the patient from 2 to 3 cc. of the old chaulmesterol. An interesting feature in this case is that the patient shows now several nodular lesions, which is of rather rare occurrence.

Dr. Berkowitz: I have been giving a patient 20 cc. of chaulmesterol at each treatment, and the patient has shown remarkable improvement. The pigmentation is disappearing rapidly, considering the disease. The only thing which I noticed was that sometimes the patient would get an attack of nausea lasting twenty-four hours. After that he felt all right. He showed nothing in the urine, no casts and no red blood cells. When he had the reaction of

nausea, I reduced the dose to 5 cc., but after the patient felt better I again increased the dose gradually to 20 cc.

DR. ABRAMOWITZ: I am surprised to hear of the tremendous doses of chaulmesterol which are being used. At my clinic the general regimen is to administer not more than 5 cc. every other day. It seems that whatever effect is obtained from the chaulmesterol is not so much from tremendous doses as by keeping the patient constantly under the effects of the oil.

DR. GRAHAM: My patient seemed to get worse when he received the small doses of which Dr. Abramowitz spoke. He fared much better under large doses, except for the rheumatic pain of which he complained.

DERMATITIS EXFOLIATIVA. Presented by DR. WALZER.

S. L., a married man, aged 38, who had four children, who had been a painter for the last nine years and whose past history was negative, had a condition that began about three months prior to presentation, with itchy patches in the axillae, fold of the elbows, groin and back of the knees. After the application of bicarbonate of soda baths for about two weeks, together with some internal medication, the lesions somewhat increased in size, and a generalized itch developed. He then applied various salves and lotions and more internal medication. While the lesions originally present improved, small itchy spots appeared on the rest of the body.

He then received more local application and seven intravenous injections. According to the patient's story, the skin became generally involved, and when first seen on Dec. 28, 1925, the patient already had generalized exfoliating dermatitis. The entire body was dry, infiltrated, covered with adherent, whitish, thin scales; the skin markings were greatly exaggerated, and the entire body was red. Within the rash were seen small pea-sized, slightly elevated areas, which were closely approximated in some locations and in others separated by normal intervening skin. This gave a generalized erythematous appearance. In the folds, in which the disease had originally started, the erythema was either of a milder degree or almost gone. The legs were swollen, erythematous and moist, and the skin was exfoliating. The hands were similarly involved. The central part of the face was red, erythematous, not in one patch but composed of tiny, slightly elevated, reddish, somewhat oozing lesions. The lips were cracked, but the mucous membranes of the mouth were normal. The axillary, inguinal glands were markedly enlarged but not conglomerated or tender. Blood examination showed: red blood cells, more than 2,000,000; white blood cells, 11,800; polymorphonuclears, 58 per cent; small lymphocytes, 3 per cent; large lymphocytes, 2 per cent; eosinophilia, 35 per cent; basket cells, 2 per cent.

DISCUSSION

DR. THRONE: This patient was referred to me some time ago when the eruption was not as generalized as it is at this presentation. At first my diagnosis was toxic erythema, and the treatment administered was catharsis and restriction of diet. The patient became very much worse, and he was given injections of sodium thiosulphate, 0.5 mg. every third day. The improvement was slight. The use of thiosulphate has been criticized, because it is supposed to irritate the kidneys. At the Skin and Cancer Hospital we have given many injections of this, and have had no case of kidney disturbance. My experience with sodium thiosulphate has been that it can be used with impunity, as far as the kidneys are concerned, and with good results to the patient. Sodium thiosulphate has been used with good results in urticarial

cases and even in prurigo. Brock, in his clinical lectures on dermatology, 1924, in discussing the treatment of some of these conditions said that thiosulphate has been used in urticaria and Duhring's disease and even in psoriasis with good results.

DR. ABRAMOWITZ: I think that if this patient's reaction comes from contact with lead in his occupation, he would show a blue line on the gum. A blood count would show the usual changes in the blood which occur in lead poisoning. I think we are not dealing here with dermatitis exfoliativa, but with one of the conditions which sometimes leads to mycosis fungoides and sometimes to leukemia. It may be that this is what the patient has. In some ways his skin presents a clinical picture similar to that of the patient that I previously presented.

SOLID EDEMA OF THE FACE. Presented by DR. WALZER.

J. K. a boy, aged 16, who had had the ordinary diseases of childhood complained that eight years ago his face had become suddenly swollen and inflamed, with high fever. A diagnosis of erysipelas was made. He was sick for three weeks, and two months later a similar attack occurred. These attacks occurred for the next two years, but during the intervals, the patient claimed that his face returned to normal. For the last four years there had been similar attacks, but the face never returned to its original size. About a year before presentation, he went to one of the local institutions, and after numerous examinations had an operation on the nose, with no relief. For the last six months, there had been no acute attacks, although the face had remained in an edematous condition.

The upper and lower lips, cheeks and nose were involved. The upper lip was three or four times the normal size and indurated, but did not pit on pressure. The lower lip was the same. The cheeks were twice the normal thickness, and their inner surfaces showed slight ulcerations. The edema extended up to the lower eyelids and sides of the nose. The physical examination was negative. The adenoids and tonsils were removed. The patient had chronic rhinitis. Roentgen-ray examination of the sinuses was negative.

DISCUSSION

DR. GAUVAIN: These cases occur more or less frequently, and I would like to know what results may be expected from the use of radium.

DR. GRAHAM: I do not see how radium could be used in this case.

DR. CHARGIN: I regard these cases as a result of habitual erysipelas. There is lymphstasis and in the long-standing case I do not see how the roentgen ray or vaccines can improve the condition.

DR. RULISON: I agree with Dr. Chargin. I tried the roentgen ray and could not obtain results. This is anatomic and I do not see how a vaccine could help the condition.

DR. ABRAMOWITZ: I have had three or four patients of this type. The last case was that of a girl who had recurrent attacks, starting with regular erysipelas which subsequently became merely erysipeloid attacks. There was the same thickening of the face. This was due to the blocking of the lymphatics by cellular infiltration, and such a condition can be relieved by the roentgen ray. Of course, if there was a permanent blocking from fibrous tissue, that would not be helped. The fact is that in two of my cases the thickening of the face became almost normal.

DR. WALZER: I think these cases are not necessarily the result of chronic recurrent erysipelas. First of all, they are not erysipelas, but an erysipeloid inflammation; and there are some cases on record in which no evidence of inflammation was observed. However, I believe that these cases are the result of a chronic recurrent inflammation of the skin and subcutaneous tissue, associated with a lymph stasis and connective tissue hyperplasia. The process is in the minute network of lymph spaces, the reticular cells in the corium and the subcutaneous tissue. This being a chronic productive inflammatory process, plus a lymph stasis, I cannot see how the roentgen ray or vaccine can help.

DR. BEST: What would be the effect of deep heat (diathermy) in such a condition? I believe the condition can be caused without any primary true erysipelas. I have seen two cases of solid edema without any previous history of true erysipelas.

DR. WALZER: I do not think that diathermy would be of much help. It might cause some change in the tissue temporarily, but would it help the obstruction to the flow of lymph?

MYCOSIS FUNGOIDES. Presented by DR. BERKOWITZ.

A. K., a man, aged 55, born in Russia, gave the following history: one and one-half years ago he had an itchy patch in the lumbosacral region, to which he paid no attention; about nine months ago, he was seen by several physicians, one of whom had a biopsy made. At presentation, the patient showed on his scalp, chest, back, arms and legs numerous dark red, slightly infiltrated patches, with slight scaliness and quite well-defined borders, which on scraping or rubbing showed capillary bleeding. There was but little pruritus present, although he gave a previous history of severe itchiness. There were also a number of square and circular dark brown patches having well-defined edges, which appeared as though due to roentgen-ray application. Dr. Throne reported that the biopsy was suggestive of mycosis fungoides.

DISCUSSION

DR. THRONE: I saw this case one year ago and made a diagnosis of possible mycosis fungoides, based on the intense pruritus and the decided infiltration which I have never seen either in psoriasis or seborrheic eczema. At that time the patient showed an eruption of six weeks' duration, on the trunk and scalp, of coin-sized, red, scaly and in some places crusted patches. Both axillae were involved. In the right axilla, there was an enlarged tender lymph node. My notes show that two weeks later there was improvement, and six weeks later everything was well except the axillary condition. Ten weeks after I first saw him, there was a recurrence of lesions on the trunk of the same type as before, except that some showed decided infiltration. Biopsy at the Skin and Cancer Hospital then showed moderate lengthening of the dermal papillae, moderate acanthosis and areas of small round cell infiltration in the dermal papillae and upper derma; also deep-seated infiltration, round cell, about the hair follicles. The blood vessels of the upper derma were rather prominent. There was some parakeratosis and hyperkeratosis and moderate perivascular infiltration. The cells in the exudate were small mononuclears and larger oval cells. Independent of the clinical picture, a diagnosis of premycosis could scarcely be made, but the histologic findings resembled those described in this condition.

DR. ABRAMOWITZ: It is difficult to make a diagnosis at the present time. The history is suggestive of mycosis fungoides, especially the itching and the infiltration. The biopsy report is not of great help, unless it shows a typical mycosis fungoides picture. Of course, if the condition is mycosis fungoides, it is too bad that the patient received an erythema dose of the roentgen ray. In mycosis fungoides, the roentgen ray should be administered in minute doses only at the beginning, for larger doses will be required later.

SCLERODERMA AND SCLERODACTYLIA. Presented by DR. A. WALZER.

S. D., a woman, aged 27, married, who had had four children, no still-births or abortions, had had "stomach trouble" for the last ten years. She also had had a number of attacks of influenza. Her present trouble dated back two years. It began with ulcerations of the middle finger of the left hand, which took about one year to heal. Gradually all the fingers became bluish, and slightly painful. The condition was worse in winter, at which time the hands would become blue, then red, but never white. The slightest exposure to cold would cause these changes to occur, and she experienced a slight tingling pain in the hands. Last winter, about ten months ago, slight ulcerations developed on the left index, right index, and right middle finger. Healing was very slow. For the last six months, the fingers had been getting rather stiff and tight. The condition of the face was only of a few months' duration. Her feet were always cold and blue. At this presentation the condition was as follows: The hands were dark red and at times almost violaceous. The fingers were cold, stiff, tapering, and the skin over them was tight, indurated and smooth, and at times red. The skin of the face was tight, smooth, indurated and not freely movable over the underlying tissues. The normal facial markings were smoothed out; the face looked shiny and somewhat fixed. Her mouth was smaller than it had been originally, and she complained that she could not open it as much as previously. The left scapular region showed similar skin changes. The feet were bluish and cold, and the radial, tibial and dorsalis pedis arteries were all pulsating. Urine, Wassermann test and physical examinations were all negative.

DISCUSSION

DR. WALZER: Raynaud's disease can easily be excluded. The color of the hands is first red, then blue but never becomes white. The skin is hard and indurated. There is no sensory disturbance. The pain is slight. The involvement of the face and other parts are also in favor of scleroderma. The question of the relation of arsenic to scleroderma was first brought up by Ayers in 1920 and 1921. He reported five cases in which he showed the presence of arsenic in the urine. While he did not claim that arsenic was the cause of the scleroderma, he suggested that there might be some connection between the intake of arsenic and this disease. When one considers the amount of arsenic that has been used in dermatology for so many years, it is surprising that scleroderma is never observed following the use of this drug. Again it has been shown that arsenic often is present in the urine of apparently normal patients, that it is probably due to the foods and drugs taken, and usually means nothing abnormal.

MULTIPLE NEVI (VASCULAR, PIGMENT AND VERRUCOUS). Presented by DR. BEST.

W. B., aged 16, a schoolboy, about ten years before presentation, developed a few moles on his chest. Up to August, 1924, he had developed about a dozen

lesions. At this time one in the left axilla, about the size of a dime, was removed surgically. Since then numerous lesions had developed all over the body. The lesions seemed to start as red, pinhead sized spots, which grew larger, in about eight or ten months became black and then after a few months more became wartlike. After they turned black and wartlike, they remained constant in size. There had been no ulceration of any of the lesions. The patient presented no subjective symptoms. With the exception of diseases of childhood, the patient always enjoyed good health. The family history was negative. At this presentation the patient showed on the chest, back, face, upper and lower extremities, many discrete scattered nevi, varying in size from that of a pinhead to that of a dime. Some were only small, red, pinpoint spots in the skin, and from these they varied to larger, red, elevated lesions, brownish to black lesions of various sizes, and large verrucous black lesions varying in size from that of a split pea to that of a dime. Three lesions had been removed; a small, nonelevated red lesion, a slightly elevated brownish lesion, and a small verrucous lesion. The pathology in all three was essentially the same, namely, angiomatous, except in the latter two, in which there seemed to be deposits of melanin. The epidermis in places projected markedly, and beneath the rete, situated in the corium, were circumscribed cystic spaces filled with blood. Beneath these areas, and projecting into the subcutaneous tissue were areas containing numerous small capillary vessels, some filled with blood and others empty. The Wassermann test was negative, and the blood was normal.

DISCUSSION

DR. BEST: The most interesting feature of this case is the fact that there are three distinct types of nevi in the same person, one apparently developing from the other. The patient also said that two of the lesions had fallen off without any interference.

DR. GRAHAM: I saw this case when the lesion was excised. At that time the lesions had a different appearance. They seemed more active. At this presentation many of the verrucous lesions seem to be more desiccated. The patient's statement of the long duration of the lesions militates against the diagnosis of melanosarcoma, but the increase in size and number of the lesions reinforces this diagnosis. The pathologist at the time of excision said that the pigment was merely broken-down blood cells, and not true melanotic pigment. I think any interference with the lesions may start a true malignancy.

DR. ABRAMOWITZ: Evidently the lesions in this case started as angiomas, and it is not the usual thing for melanomas to develop from angiomas. Irrespective of the fact that the boy has had one lesion removed and irrespective of the fact that the spots are increasing since the removal, I believe the growths are benign. I am not convinced that these lesions are either nevi or melanomas. Under the microscope it is evident that the patient has a vascular tumor. There are so many red blood cells present that it is easy to see that the pigment is not melanin but blood pigment. I do not think the question of epithelioma arises.

DR. HECHT: The possibility of malignancy must be considered and also that the condition might not improve with treatment. I should advise no treatment.

DR. HOWES: The most interesting thing about this case is the fact that the disease seems self-limiting, none of the verrucous lesions being larger than a dime, and several having fallen off leaving a small scar. It may be interesting to see a section of such a scar.

DR. BEST: I saw the patient for the first time in August, and at that time I thought the condition should be let alone. Later, when the patient reported that one of the lesions had fallen off, I became convinced that there was no malignancy, and therefore I decided that no serious risk would be incurred if the lesions were removed completely. I therefore removed the one on the arm which was interfering with the patient's movements, and one from the shoulder by excision with a radio-knife. The patient was anxious to have them removed from the face, and I think the suggestion of the use of radium is a good one. I shall watch the result from the use of radium before proceeding with excision, fulguration, electrolysis or carbon dioxide snow.

A CASE FOR DIAGNOSIS. Presented by DR. A. WALZER.

M. W., a woman, aged 40, married, who had had nine pregnancies, and whose first, second and fifth children were alive and well, the others being full term stillborn, had had scarlet fever in her childhood, but there was no venereal history. Because of the stillbirths she had had four Wassermann tests, the last two years before presentation. All were negative. During her seventh pregnancy, she was given about five intravenous injections, but her pregnancy terminated in stillbirth. She received no further treatments of any kind, and her last two pregnancies terminated at full term in stillbirths. Her present condition was of two years' duration. It began as a tiny, slightly itchy spot on her cheek, which gradually spread. She did not know the duration of the lesion on her forehead. She had had sores in her mouth for the last two years, noticeable especially after she had eaten spicy foods. On the left cheek she presented a dollar-sized, erythematous, slightly infiltrated plaque, plus a slight telangiectasia. At the upper-outer part of the plaque and lower-inner part were two dime-sized patches which were covered with adherent scales. The removal of these scales, showed large, follicular openings. At the mucocutaneous margin of the lips there was a white line about one fourth of an inch in width, extending all the way across. This was rough and covered with a thin scale. Tiny scars were present on both lips. On each posterior lateral margin of the tongue, there was a whitish band about one-fourth inch wide. This was not infiltrated. Along the borders of this band there were tiny white papillae. On the right margin of the tongue near the tip there were two ulcerations. The posterior one was pea-sized and deep, and the anterior one was larger, more superficial, with a sharp border, and pink. Within the left ear, there were lesions similar to those appearing on the face.

DISCUSSION

DR. ABRAMOWITZ: The appearance of the plugs and the patch on the left cheek alone suggest folliculitis ulerythematosa reticulata which McKee described several years ago. In his case the lesions were confined to the cheeks. There was no activity except the appearance of the small plugs; and when these fell out, small pinpoint depressions were left, arranged in a network. However in this case the patch on the left cheek, together with the patches on the tongue and lips plus the patient's history, all contributed to a diagnosis of lupus erythematosus.

DR. CHARGIN: I agree with Dr. Abramowitz; the entire case is one of lupus erythematosus. The only thing against this diagnosis is the fact that the patient has had this condition for two years, and there is no atrophy. However, even this is observed at times in lupus erythematosus. While there are not very many scales to be seen on the lesion on the cheek, the one in the ear shows

scales; and this diagnosis is further favored by the fact that the patient presents lesions on the lips which seem to be typical of lupus erythematosus.

DR. WALZER: When I saw the case originally, I thought it was lupus erythematosus. However, this eruption should have left atrophies after a duration of two years; and the patient shows none. Also, lupus erythematosus usually does not begin in small pinpoint follicular plugs as is the case here. I think the fact that the eruption, beginning as small follicular processes with plugs, no erythema or slight erythema and no atrophy, militates against the diagnosis of lupus erythematosus. Syphilis might be considered. The patient gives a history which often is indicative of syphilis. But would lupus erythematosus in a syphilitic person produce such a picture? Is the condition altogether syphilitic in some atypical form? The lesions of the lips and tongue are suggestive of those of lupus erythematosus, but those on the face are not.

GENERALIZED NEURODERMATITIS? MYCOSIS FUNGOIDES? Presented by DR. ABRAMOWITZ.

L. S., a man, aged 31, born in Russia, a machinist, who had been in the United States for fourteen years, had been married for two years but had no children. He was a tall, well built man and had never been ill. Three years before presentation, without any apparent reason, he began to have itching all over the body, which in six months developed into an eruption over his trunk and extremities. With slight periods of remission he had remained as presented at the meeting. At times he had been much worse. With the exception of a few seborrhoeic-like patches on his eyelids and temples, his face and scalp were not involved. The rest of the body showed a thickened and dry skin, which owing to the many shiny, deep red, papular lesions, gave a similar color to the entire skin. In addition there were many almond-sized nodular lesions, especially on the neck and trunk. There was a marked tendency to scaling, which the patient kept down to a minimum by anointing himself with petrolatum. Numerous scratch marks from severe itching were also present. He had been under observation by several dermatologists, and a biopsy had been taken by one, with the report that there was no sign of mycosis. The regional glands were slightly enlarged. The blood picture was normal. The urine was normal, and the Wassermann test was said to be negative. He had a slight systolic murmur when presented, and a temperature of 100 F. His blood pressure was 118, and his pulse rate ranged between 100 and 110. Another biopsy was taken by the presenter. He was being given ¼ holzknecht skin unit of roentgen ray to various parts of the body, with ascending doses of sodium arsenate by injection. He had shown considerable improvement, although he had been under treatment for only five days.

DR. SATENSTEIN reported that both sections of the skin removed from the nodular lesions showed a marked acanthosis of the epidermis with a papillary and subpapillary plasma cell perivascular infiltration. The intima of the vessels were thickened. There was no evidence of mycosis fungoides nor any definite skin pathology with the exception of a plasnoma.

GRANULOMA ANNULARE. Presented by DR. CHARGIN.

E. F., a woman, aged 23, unmarried, a stenographer, presented an eruption of three years' duration. It appeared originally on the right hand over the metacarpal phalangeal joints. It made its first appearance during the summer

two years before presentation, and had disappeared during the subsequent winter. Since its return during the last year, however, the eruption had persisted. She received local applications from a general practitioner until four months previously. New lesions had been appearing during the past six months. When first seen she had typical white, ivory-like circles over the metacarpal phalangeal joints. This patient has received one fourth skin units of roentgen ray, a total of seven doses, and the improvement has been marked.

DISCUSSION

DR. ABRAMOWITZ: I have seen several cases of granuloma annulare, and my impressions are similar to those of Dr. Chargin. However, some lesions of granuloma annulare have an entirely different etiology from others. In a small boy, whom I presented two years ago, I found that they were of tuberculous origin. The boy had had twelve or thirteen lesions over his whole body, which disappeared under alpine lamp treatment and pressure with the Kromayer light. One lesion on his foot did not disappear until carbon dioxide snow was applied. At that time I was strongly impressed with the statement that Dr. Chargin had made to the effect that trauma often causes the lesions to disappear. Since then I have presented another case of granuloma annulare in a little girl aged 6, who had received four or five treatments with ½ units of the roentgen ray, with no response. As soon as the Kromayer lamp was applied, the lesions disappeared. This fact, together with the fact that some of the lesions healed spontaneously, leaves one in a quandary as to the form of treatment to employ. It is difficult to understand how six ¼ units of roentgen ray can affect a change in granuloma annulare. One-quarter unit given once a week over a period of six weeks is not drastic treatment, and one would not expect results from such a light treatment in any true granuloma; therefore why expect it in granuloma annulare?

ECZEMA VERRUCOSUM. Presented by DR. FRANK.

S. B., a man, aged 35, unmarried, a laborer, presented a negative history except for the usual diseases of childhood. Five years before presentation, while in the Italian army, he had typhoid. His family history was negative. The present skin condition started three years before as a small blister on the inner aspect of the right ankle, which broke, leaving a denuded area, which was immediately covered with a crust. This condition spread slowly and steadily. At that time the patient complained of moderate itching and burning. On examination the patient exhibited on the inner aspect of the leg from the ankle to about one-third below the knee, a fairly defined brownish papular squamous rash, covered with heaped up scales and crusts. The crusts were large, thick, "cauliflower," dry, friable and firmly attached. A dry surface was present on removal of the crusts. At areas where the crusts were absent, the rash showed slight scaly coverings. There were varicose veins, of the leg. At the ankle, scarring was present, probably due to a varicose ulcer. The Wassermann and urine tests were negative.

DISCUSSION

DR. BEST: I think it is the ordinary, logical, sequence of varicose veins. The varicose veins cause poor nutrition of the skin resulting in ulceration and secondary eczema.

E. A. GAUVAIN, M.D., Secretary.

ST. LOUIS DERMATOLOGICAL SOCIETY

Regular Meeting, January, 1926

A CASE FOR DIAGNOSIS. Presented by DR. RICHARD KRING.

Mrs. A. N., aged 30, had had seven children, five of whom were living. The family history was negative. The present condition began one year ago on the right forearm, six months later appearing on the left arm. Many lesions, irregular in shape, from a pinhead to 2 cm. in size, were observed on the extensor surfaces; also on the face and the upper part of the chest. These were violaceous, dry and pruritic. The borders were raised, with centers depressed, some of the centers showing fine lines. The Wassermann reaction and urinalysis were negative.

DISCUSSION

DR. BROWN and DR. CONRAD thought it a case of lichen hypertrophicus.

DR. KRING: I would call it an annular form of lichen planus, the borders being somewhat raised, but the distribution peculiar in character, being on the extensor surface rather than on the flexor surface as is usually seen in lichen planus. The distribution on the face and chest is linear in outline.

DR. GRINDON: I agree with Dr. Kring. The annular form of lichen planus occurs in one of three ways, namely: by the extension of a single lesion at the periphery, the center being depressed; by the lesions arising from the initial lesion in the form of a ring; or, thirdly, by the ring formation through the coalescence of several lesions.

DR. CONRAD: Are striae not found in the hypertrophic type as well as in the annular form of lichen planus?

DR. GRINDON: They are common to all types.

A CASE FOR DIAGNOSIS. Presented by DR. THEODORE GREINER. (From St. John's Clinic.)

M. S., an 18 months old child, had had no serious illness since birth. Both parents were living and in good health. There was no history of tuberculosis in the family. The present condition followed the appearance of a verruca on the right forearm which the child had irritated by scratching, infection following. A physician prescribed the use of mercuric chloride soap. One week later the present eruption developed. At presentation an inflamed area about 2 cm. in diameter was seen on the right forearm. The eruption was generalized, and consisted of minute pin-point papules with scales, grouped, with a verrucous feel, mildly pruritic. There was no dermagraphia. The urinalysis was negative.

DISCUSSION

DR. BROCKELMANN: I thought there were a few lesions of molluscum contagiosum, the other condition noted being lichen urticatus.

DR. KRING: I agree with Dr. Lunsford's diagnosis of molluscum contagiosum, but I am of the opinion that the linear arrangement and angular shape, together with the shiny, dry character of the violaceous lesions suggest acute lichen planus. The other eruption may be a dermatitis.

DR. GRINDON and DR. TOOMEY thought the entire condition might be molluscum contagiosum, Dr. Toomey adding that the anatomic picture might suggest Darier's disease.

DR. GREINER: I think two conditions are possible, one lichen urticatus, the other a beginning lichen planus, time being the important factor in diagnosis.

NOTE.—The eruption disappeared in one month, leaving no stains or scars.

A CASE FOR DIAGNOSIS. Presented by DR. RICHARD S. WEISS.

Mrs. W. F. H., a white woman, aged 54, was referred to Dr. Weiss by Dr. Olmsted who had been treating her for a mild type of diabetes which he had been able to control entirely by moderate restriction of her diet. The skin condition began thirty years ago, appearing first on the face, then slowly spreading to the trunk and to the extremities. There were no subjective symptoms except a mild pruritus at infrequent intervals.

At presentation a generalized eruption was noted which was thickest on the trunk. On the face the type observed was that of a rosacea, having the appearance of a deep blush, which on examination was found to be due to capillary dilatation. This same appearance continued downward on the neck and the anterior thoracic skin, on the exposed areas only. On the trunk the eruption consisted of deep red to light red papules and macules, many of which faded on pressure while others were apparently granulomatous. They were arranged partly in groups, partly in streaks and lines, and there was some tendency to follow the cleavage lines of the skin posteriorly. Some of the lesions were wheal-like; others were evanescent. There were also a few brownish macules. The papules varied in size from 3 or 4 mm. to about 1 cm.

The patient had a moderate saddle nose resulting from injury in childhood. There was no glandular enlargements. The thyroid apparently was normal. There was no enlargement of the heart, but a soft systolic murmur was present though not transmitted. Ophthalmoscopic examination was negative. Four months previously the blood sugar was 0.224; one month previously, 0.179. Six weeks previously the uric acid was 3.2 mg. One month before presentation the leukocyte count was 10,200. At that time the differential count showed the following: polymorphonuclears, 62 per cent; small mononuclears, 34 per cent; large mononuclears, 3.5 per cent. The patient had lost 20 pounds (9 Kg.) in weight during the past eighteen months.

DISCUSSION

DR. BROCKELMANN: I think it is a generalized form of vascular nevus.

DR. TOOMEY: It may be a case of Majocchi's disease, purpura annularis telangiectodes.

DR. GRINDON: I think it is too extensive for Majocchi's disease, although the distinctly telangiectatic appearance of the lesions give a definite possibility of such a condition.

ERYTHEMA MULTIFORME.

S. M. (from Dr. M. F. Engman's Clinic at Barnard Free Skin and Cancer Hospital), aged 19, a native of Russia, of Jewish extraction, a post-office clerk, presented himself, with edema of the face and extremities and an eruption on the skin. He had had measles in infancy, and grip five years previously, since which time he had been subject to "colds." He had recently been operated on for deviated septum, a severe hemorrhage of the nose occurring four days later, which was partly controlled by packing, by local application of cocaine and epinephrine, and a subcutaneous injection of 5 cc. of hemostatic serum, finally being checked by local application of iron sulphate. Previous to opera-

tion he had received calcium and parathyroid tablets by mouth and 2 cc. of hemostatic serum under the skin. Complete blood examinations and urinalyses were carried out after admission to the hospital.

He had improved markedly until the date of presentation, when he noticed edema of the eyelids and distal extremities and an eruption of red blotches on the dorsum of both hands. There was some pruritus. The blotches were sharply circumscribed and indurated, varying in size from that of a split pea to that of a dollar, round, oval, circinate, gyrate, irregular in shape, some in distinct ring formation. Many had fading centers. During examination some were seen to fade while others simultaneously appeared. There was no dermographism.

Physical examination was otherwise negative, except for a systolic murmur heard over the apex and transmitted toward the left axilla. The aortic and pulmonary sounds were of good quality. The blood count showed: 17,000 white cells; differential count: polymorphonuclears, 90 per cent; small leukocytes, 10 per cent; hemoglobin, 85 per cent; there were no eosinophils.

DISCUSSION

DR. GRINDON: It is a question in my mind whether to call the lesions erythema or urticaria. In regard to the edema in such cases, I think there is no real distinction between erythema and angioneurotic edema, both being urticarial.

DERMATITIS VENENATA.

J. S. (from Dr. Engman's Clinic at Barnard Free Skin and Cancer Hospital), a man, aged 40, a railroad laborer, had a condition that had lasted for eight months, beginning with redness followed by a papular eruption between the fingers of both hands, which was accompanied by intense pruritus, spreading to the dorsum of both hands and up the wrists halfway to the elbows. After one month a similar condition appeared on the face. Several days later an eruption appeared on the scrotum, penis, perineum and gluteal regions.

At presentation there was observed on both hands, mainly on the dorsum, and on both wrists anteriorly and posteriorly, a thick purplish lichenoid skin, poorly circumscribed. On the periphery of the lesions were small papules. The face also showed a lichenoid skin. The penis and scrotum were rough, thick, red, partially denuded of epithelium. There was considerable edema about the buttocks and the intergluteal folds. The skin was thick, scaly and was studded occasionally with papules and vesicles. He had had various medications locally applied.

A CASE FOR DIAGNOSIS.

I. N., (from Dr. Engman's Clinic at Barnard Free Skin and Cancer Hospital), aged 3 years, was brought to the clinic with a history of an eruption on different parts of the body which had continued since birth. The condition as observed at presentation had a duration of two weeks. On the flexor surfaces of both elbows and in the left popliteal space were poorly circumscribed slightly indurated patches of dermatitis, about the size of a dollar, which were composed of small red papules on an erythematous base. The patches were covered with pus, and scales. There was a history of pruritus with moisture. The scalp showed a thin, dry scaling, but no eruption. The rest of the body was free from eruption. The child was placed on one-half

strength tar salve applied to the lesions on the extremities and 4 per cent sulphur salve for the head.

Ten days later, she developed on the anterior abdominal wall, immediately to the right of the umbilicus and midway between the umbilicus and the costal margin, numerous discrete, red papules surrounded by a pink areola. These were indurated, of match-head size, and had the appearance of an urticarial lesion. There was a history of intense pruritus. There were no papules on the characteristic scabetic sites. To date the lesions on the extremities had shown no improvement.

DISCUSSION

DR. GRINDON: It has the appearance of an ordinary case of sensitization dermatitis. The lesions on the arms are discrete, with the tops scratched off. Urticarial lesions are more lasting in children than in adults. These lesions have the appearance of an eczema of the urticarial type. Eczema and urticaria may sometimes be seen coexisting in the same case .

A CASE FOR DIAGNOSIS.

Mrs. B. G. (from Dr. Engman's Clinic at Barnard Free Skin and Cancer Hospital), aged 43, presented herself with the following history: Six weeks previously a wartlike growth had appeared three quarters of an inch below the left eyelid. This grew yellow, resembling an ordinary pimple, which continued to increase in size during the following five weeks. At that time she "picked" the lesion causing an exudation of blood. She applied iodine. There were no subjective symptoms. At presentation, a hard, well circumscribed lesion about 0.5 cm. in diameter was observed at the site named above, which was easily movable under the skin. This was surrounded by dark skin which was probably due to the use of iodine. There was no sign of ulceration or of rolled edges.

DISCUSSION

DR. KRING: I think it is verruca vulgaris.

DR. GREINER and DR. TOOMEY suspected a beginning epithelioma.

DR. GRINDON: The profile view in this case is much more markedly epitheliomatous than the frontal aspect.

NORMAN TOBIAS, M.D., Secretary.

MANHATTAN DERMATOLOGICAL SOCIETY

January Meeting

G. ANDREWS, M.D., *Chairman*

GRANULOMA OF UNDETERMINED ORIGIN. Presented by DR. ELLER for DR. WISE.

H. F., an engineer, married, aged 30, presented on both inguinal regions, granulomatous masses which extended from the iliac crest to the perineum posterior to the scrotum, which were raised on the surface of the skin about 3 inches. The growth was fungoid and moist and had a fetid odor. There was no pain. The tumors began to grow about ten years previously, one appearing on the left groin. This was removed with an adjacent gland, and a

microscopic study revealed a granuloma of undetermined origin. Three years later hypertrophic lesions resembling dermatitis vegetans appeared on both groins and grew to the present size. The skin over the hips became bound down and sclerotic. Stricture of the rectum had been present for about two years. A microscopic study revealed the same type of changes as those from the groin section. Destructive changes of the iliac bones and of the lateral surface of the lumbar vertebrae were present, as revealed by a roentgenogram. Examinations made for the following infections consistently proved negative: tuberculosis, actinomycosis, blastomycosis, sporotrichosis, granuloma pudendae. The patient is at present receiving filtered roentgen-ray therapy and intravenous injections of sodium iodide.

DISCUSSION

DR. ROSEN: I saw the patient about four weeks ago, and the change from whatever treatment he has received is remarkable. The lesions are almost one-half their original size. I had discussed the case with Dr. Goldenberg, who had seen the patient three years previously, and at that time was inclined to think the eruption was tuberculous. The presenter forgot to mention the fact that the patient had similar lesions in the rectum, sigmoid and pelvic bones.

DR. ELLER: When the case was first seen by me the lesions were as Dr. Rosen described. The examination for the tubercle bacillus was negative. The microscopic examinations showed only granulomatous tissue. When the patient was presented before the New York Dermatological Society, a diagnosis of granuloma inguinale was favored, and treatment with tartar emetic was suggested as a therapeutic test. He was given sodium iodide injections, but developed a slight iodide rash, and the amount of drug had to be reduced. After erythema doses of filtered roentgen rays were given, the lesions decreased to about half their original size.

GRANULOMA ANNULARE. Presented by DR. ELLER.

A woman, about 34 years old, presented on the back near the shoulder, three annular lesions ranging in size from that of a dime to that of a penny, with raised infiltrated borders which were shiny and hard and which had normal skin in the center. There was also one lesion on the left hand which was typical of granuloma annulare.

DISCUSSION

All agreed with the diagnosis.

BROMODERMA. Presented by DR. ANDREWS.

A woman, aged 39, married, had an eruption which started six weeks before presentation as blisters on the hands. On the dorsa of both thumbs and index fingers were erythematous, proliferating, discrete lesions, varying in size from that of a split pea to coalescent patches of fungating appearance the size of half a dollar. The lesions were slightly tender. The patient said that for seven months she had been taking a salty medicine for high blood pressure.

DISCUSSION

DR. BECHET: I am much interested in Dr. Andrew's statement that sodium chloride was administered by mouth, as I was not aware that any improvement could be brought about by its oral administration. In three recent cases of bromoderma, intravenous injections of decinormal salt solution had been

exceedingly effective. There is no doubt that sodium chloride is the most effective remedy for the removal of these usually rebellious and disfiguring lesions.

LYMPHANGIOMA CIRCUMSCRIPTUM. Presented by DR. ELLER.

R. M., a negress, aged 14, born in the British West Indies, came to the clinic, Dec. 17, 1925; the entire tip of the tongue was involved. It presented a bulbous, erythematous lesion the size of a hickory nut. The surface was papilliform, with translucent, vesicular-like structures and some bluish areas. There was a general hypertrophy of the entire lymphatic tissue of the tongue. The tonsils were enlarged. The patient is at present under treatment with radium emanation, filtered through 0.5 mm. of silver.

DISCUSSION

DR. SATENSTEIN: Radium therapy, although good, is a very slow method of treating a condition like this one. I would cut the entire lesion out with a cautery knife.

DR. ELLER: The lesion was treated with radium emanation. An exposure of twelve minutes with a tube containing 100 millicuries of radium filtered through 0.5 mm. of silver was used. It was expected that an additional treatment like this one, a month later, would suffice for a cure.

DERMATOPHYTOSIS? TERTIARY SYPHILIS? Presented by DR. ELLER.

Mrs. S. C., aged 45, came to the Vanderbilt Clinic, Dec. 22, 1925, complaining of an itching and scaling eruption on the right foot. The eruption was limited to the sole and sides of the foot and between the toes. There was a marked hyperkeratosis of the sole with scaling. The margins were dark red, and the skin was moist as old bullae and vesicles had been present. The skin between the toes was white, soft and boggy. The latter condition was also found to a lesser extent between the toes of the left foot. No papules were seen. An examination for tinea was negative. A blood Wassermann test was four plus.

DISCUSSION

DR. PAROUNAGIAN: I believe the condition is syphilis, and advise injections of arsphenamine and mercury.

DR. BECHET: The presence of the moisture and the maceration between the toes favor the clinical diagnosis of dermatophytosis.

DERMATOPHYTOSIS. Presented by DR. OCHS.

A young colored boy presented an eruption of six months' duration. It started from the cleft back of the ear and extended over the upper part of the cheek to and into the lower part of the scalp and back to its origin, forming a complete circle about 4 inches in diameter. This was interesting, because it demonstrated the fact that the disease attacked the hairy region as well as the nonhairy region. In the hairy region there were no broken hairs.

DISCUSSION

All agreed with the diagnosis.

LEUKOPLAKIA OF THE TONGUE: TABES DORSALIS. Presented by DR. PAROUNAGIAN.

Mrs. K. R., aged 49, came to the Bellevue syphilis clinic on Dec. 23, 1925, complaining of difficulty in walking and of having shooting pains in her legs. Her past history was negative in respect to venereal infection. Her Wassermann examination revealed a four plus reaction. Her knee reflexes were absent; the pupils did not react to light or in accommodation, and the Rhomberg sign was positive. Further examination revealed a marked leukoplakia on the dorsum of the tongue. She admitted that she smoked.

DISCUSSION

DR. PAROUNAGIAN: I have seen leukoplakia in two female patients and in both instances the women were smokers. I believe that most leukoplakias occur in syphilitic subjects who smoke.

DR. ROSEN: Not all leukoplakic infiltrations are of syphilitic origin. I saw cases which were not. One case was that of a young lawyer with leukoplakia of the tongue and buccal mucosa, who gave a history of chronic pustular skin eruption since early life. He had been treated by many physicians. Each gave him arsenic in some form. He had an arsenical keratosis, palmer and plantar, with pigmentation. I believe the arsenic had produced the leukoplakia. Phenobarbital can also give rise to leukoplakia-like lesions if taken over a long period of time. I had such a case in a young girl, an epileptic, who had been taking the drug for more than a year. She developed bullae of the tongue and buccal mucosa, and when the phenobarbital was stopped, the ulceration healed. This resulted in superficial atrophy with leukoplakic infiltration.

LICHEN PLANUS ANNULARIS ET PIGMENTOSA. Presented by DR. ELLER.

A. P., aged 34, a negress, complained of a generalized eruption of one month's duration. It began on the backs of the hands, and spread upward. There were faint white patches on the cheeks. The eruption was profuse on the thighs and less on the front of the legs. It consisted of flat-topped, shiny, polygonal papules, with a bluish tint, ranging in size from that of a pinhead to that of a pea. Most of the lesions were stained deep brown, showing a rim of shiny papules at the edge. The spots were about 1 cm. in size. On the outer side of the right elbow were two broad linear pigmented patches. On the lower part of the back where the eruption was most profuse, the pigmentation was most pronounced, being almost black. There was itching at first, but after taking green pills (probably mercury) the itching became less intense.

DISCUSSION

All agreed with the diagnosis.

A CASE FOR DIAGNOSIS. Presented by DR. OCHS.

A woman, aged 40, presented two large fungoid masses, one on the upper part of the arm and one on the body just below the axilla. These were so situated that when the arm was brought down on the body, one mass overlapped the other. Unfortunately, when a biopsy was made the section was cut so thick that no report could be made. The Wassermann test was negative. When I first saw the patient, one month ago, the lesion was much smaller than at this presentation. A tentative diagnosis of mycosis fungoides was made.

DISCUSSION

Dr. Satenstein: Lymphosarcoma and granuloma pyogenicum should be excluded or confirmed. If there is no evidence of mycosis fungoides, we will probably find that the tumors belong to the sarcomas.

Note.—Microscopic examination proved mycosis fungoides to be the correct diagnosis.

Burrowing Perifolliculitis Capitis. Presented by Dr. Rosen.

R. I., a man, unmarried, aged 21, an American, presented an eruption on the scalp which was of one and a half years' duration. Throughout the scalp there were a great number of hard and soft nodular and ulcerating masses with communicating sinuses. These masses ranged in size from that of a pinhead to that of a quarter of a dollar. The surfaces of these nodules showed dilated follicles and in places comedones. On pressure, pus exuded from some of these. It began on the right side of the occiput as a small furuncle, which was diagnosed as a cyst, and it was excised after it had reached the size of a walnut. The scar of the incision could still be seen. Since that time these furuncles have increased in number, and new ones have appeared as others cleared up. This case is presented on account of its rarity. A few years ago Dr. Wise and Dr. Parkhurst presented a similar case and published it.

Hodgkin's Disease. Presented by Dr. Bechet.

T. A., a Chinese, from Dr. Aitken's service, said that four months previously he noticed a thickening of the skin, with much itching, and shortly thereafter, the tumors appeared. When first seen on the day of presentation, he had a generalized inflammatory thickening of the skin, with marked pruritus, and such great enlargement of the lymph nodes in the neck and groin as to constitute real tumors. As the patient had appeared for the first time that day, no pathologic work had as yet been done.

DISCUSSION

All agreed with the diagnosis.

A Case for Diagnosis. Lichen Nitidus? Scabies? Presented by Dr. Bechet.

J. S., a colored man, aged 26, said that the eruption had been present for twelve days. It consisted of pinpoint to pinhead sized noninflammatory, raised, whitish lesions on the penis and back of the neck, and a generalized papulovesicular eruption on the face, arms and trunk. There was no history of drug ingestion.

DISCUSSION

Dr. Ochs: The case presents features of lichen planus, scabies or follicular keratitis. I did not see any vesicles. On the shaft of the penis the eruption looks like lichen nitidus. A final diagnosis will probably be lichen planus.

Dr. Eller: This eruption fits in with the clinical picture of a papular, vesicular, iodide eruption.

Dr. Parounagian: I favor a diagnosis of lichen planus. I saw a number of shiny vesicles, and the condition is acute. Frequently superficial vesicles may be seen in a case of lichen planus when the patient has been given arsenic.

Dr. Bechet: The lesions on the back of the neck and the penis resemble lichen nitidus. The man gives a negative history of drug ingestion, and there

is nothing in the appearance of the eruption to suggest iodide. The vesicles are too superficial to suggest a vesicular lichen planus. No definite diagnosis is possible without further observation and microscopic study.

DAVID L. SATENSTEIN, M.D., *Secretary.*

NEW YORK DERMATOLOGICAL SOCIETY

Regular Meeting, Jan. 26, 1926

A. SCHUYLER CLARK, M.D., *President*

LUPUS ERYTHEMATOSUS. Presented by DR. FRASER.

A. H. H., an unmarried man, aged 27, had had the disease for two and a half years. The eruption on the face and ears developed in the usual way. The lesions on the hands and feet began as an erythema pernio (chilblains).

DISCUSSION

DR. HOWARD FOX: The case impressed me as a possible lupus erythematosus disseminatus, not merely because the lesions were so disseminated, but because they were superficial and ill defined. Few suggested the fixed type of the disease. It is possible that all the nondescript lesions on the forearms, even those on the feet, could be a part of the process.

DR. WEIDMAN: After what we see on the face of this patient, we have little recourse but to consider the entire picture as that of lupus erythematosus; but as far as the morphology alone is concerned, I think we could not make a diagnosis from the lesions on the hands and feet. It all goes to show how varied may be the morphologic manifestations of what seems to be the same basic pathologic process.

DR. FRASER: One of the principal reasons for presenting the case was to get an opinion from the members as to whether the lesions on the feet also were an expression of lupus erythematosus. There is a definite erythema pernio on the hands. The patient states that the eruption began as chilblain, which brings up the question of the relation of pernio to lupus erythematosus. The rash on the body developed within the last few days. Dr. Weidman suggests that it may be due to the ingestion of quinine. The patient has been using this drug in 5 grain (0.32 Gm.) doses three times daily. I should like to have Dr. Schamberg's views in reference to treatment.

DR. SCHAMBERG: I did not see the patient, but think the remedy par excellence in lupus erythematosus is gold. Accumulated evidence shows that many cases of lupus erythematosus are most pronouncedly influenced by gold intravenously and sometimes internally. I have had a case of long-standing butterfly lupus erythematosus of the face in which 75 per cent of the eruption has disappeared under gold treatment. If it had not been for the scarring and telangiectasis due to the maladroit use of the roentgen ray, it would have been a splendid cure.

PEMPHIGUS BEGINNING IN THE MOUTH. Presented by DR. HOWARD FOX.

Mrs. L. L., aged 53, a Roumanian Jewess, had lived in the United States for the past eighteen years. She was the mother of six children. She had

always enjoyed good health until five months prior to presentation, when the eruption appeared suddenly and without apparent cause. Until three weeks previously it had been confined to the mouth and had been the source of great discomfort, especially when eating and drinking. She had lost 12 pounds (5.4 Kg.) since the onset of the disease. The eruption had appeared on the skin three weeks before presentation.

Examination showed an extensive eruption of the buccal cavity, affecting the cheeks, lips, tongue and palate. It consisted of bright red, shiny, irregular-sized tender areas, with shreds of whitish epidermis at the edges of many of the lesions. No unruptured bullous lesions were noted. On the cutaneous surface were seven vesiculobullous lesions scattered over the anterior aspect of the trunk. There was one pea-sized tense vesicle arising from normal skin, the other lesions becoming flaccid and partly crusted. The patient was of medium height and weighed 147 pounds (66.7 Kg.). Her general condition was fairly good.

DISCUSSION

DR. WHITEHOUSE: I agree with the diagnosis. The lesions in the mouth may be present even longer than in this case before the development of lesions on the body.

DR. SCHAMBERG: I am in accord with what Dr. Whitehouse said. It is not uncommon for pemphigus to begin with lesions on the buccal mucosa and to remain there for some months. That brings up the case shown by Dr. Wise at the meeting of the Atlantic Dermatological Society, in which the lesions were confined to the mouth for two years. I have never known of a case of pemphigus to be preceded by so long an eruption circumscribed to the mouth.

DR. HIGHMAN: The length of time that buccal lesions of pemphigus may persist before dissemination of the eruption takes place is variable. My memory is getting a bit vague about a series of cases reported by Dr. Goldenberg and myself some years ago, but in one or two I am sure the lesions had existed in the mouth for a period exceeding a year. I have had the impression from time to time that pemphigus is an infectious exanthematous disease. Often the portal of entry seems to be the mouth, and the lesions appear after some dental manipulation I should not be surprised if lesions of the kind Dr. Fox has shown are in effect roughly a sort of primary lesion of a disease which will become generalized.

DR. WEIDMAN: If there is anything in the nervous theory of pemphigus, as in Dr. McGlasson's recent report, these cases which begin in the mouth would be the kind to examine for disturbance of the peripheral nerves, because we would be able to confine our examinations to restricted portions of the central nervous system and compare them with others which apparently were not affected. I do not know of any exacting neurologic examinations having been made in such cases, but, if not, such patients as this might be particularly desirable for that sort of study.

DR. BECHET: I am much interested in what Dr. Highman said about an infectious origin, for I have presented two cases in which the lesions were confined entirely to the mouth for a year and a half and two years, respectively, both cases in women. They stated that the appearance of the bullae had followed the extraction of several teeth and the fitting of a new plate which had proved irritating, requiring considerable adjustment. Both of these patients had constantly recurring lesions on the palate and buccal mucosa. After a year and a half and two years, a generalized pemphigus manifested itself, with

death a few months later. The teeth of Dr. Fox's patient were in bad condition, and the gums were septic.

DR. HOWARD FOX: In regard to lesions first appearing on the mucous membranes, I recently presented a case in which they had been present solely in the mouth for eight months. On the day of presentation, cutaneous lesions were first noticed, which clinched the diagnosis of pemphigus.

DR. SCHAMBERG: I have never been convinced that what the ophthalmologists call "essential shrinking of the conjunctiva" is true pemphigus. The patient doubtless develops a bullous eruption on the cornea, and the shrinking occurs from the changes which take place. Of course, one may have blebs on the cornea in pemphigus, and then a similar shrinking occurs. I recall several cases of essential shrinking, diagnosed as such by ophthalmologists, that have continued for many years without developing any lesions of pemphigus on the cutaneous surface.

CHRONIC EDEMA OF FACE AND PAPULONECROTIC TUBERCULID OF HANDS. Presented by DR. HOWARD FOX.

A. M., aged 23, born in the United States, was an employee in a box factory. At the age of 6, she had undergone a radical operation for mastoiditis, following which her hearing on the affected side was impaired. Shortly afterward she began to suffer from periodic attacks of redness and swelling of the face, affecting chiefly the eyelids and cheeks. The attacks were accompanied by rather severe constitutional symptoms, confining her to bed as a rule for two weeks. These attacks were invariably called erysipelas by the physician in attendance. Her temperature at times was 105 F. Following each attack the skin would eventually scale and not return to a normal color and smoothness until about two months had elapsed. She had had a total of eighteen such attacks which, as a rule, appeared in the winter or spring. From the outset there had been a moderate edema of the eyelids which had persistently remained. It was confined to the upper and lower eyelids and the loose tissues immediately beneath the eyes. The skin was normal in color and there were no subjective symptoms. The patient also presented distinct evidences of tuberculosis. There was an irregular scar at the left side of the neck resulting from the removal of glands at the age of 14. There were also a few enlarged cervical glands still present. Near the fifth metacarpophalangeal joint of the right hand was a scar and loss of tissue where she stated some "bone fell out." During the past four years she had suffered also from an eruption of the hands, especially affecting the backs and tips of the fingers and knuckles. They consisted of a continuous appearance of one or two lesions at a time which were pea-sized, indolent, papules eventually undergoing necrosis and leaving whitish, more or less superficial, scars. The patient was of small size and in poor physical condition.

DISCUSSION

DR. HIGHMAN: I fancy that the patient simply presents two conditions, and unless a careful study reveals a relationship between the two we shall have to assume that there is none.

DR. SCHAMBERG: The case is one of great interest. There can be no doubt about the diagnosis of papulonecrotic tuberculid and tuberculous bone disease of the hands. The question is as to the nature of the erysipelatous attacks. One must admit that the history is peculiar. It is unusual for a facial erysipelas to last two months, and most unusual for a patient to have recurring attacks

during the greater part of her life. If she had a focus of infection in the nose, it might account for it. I think it is the usual experience that recurrent cases that develop on the face from a nasal infection run a mild course. There is a bare possibility that there is a connection between these attacks and the underlying tuberculous condition. We know of cases of acute lupus erythematosus in which the patient develops erysipeloid attacks with high fever and marked prostration; and it is conceivable that this patient may have sufficient resisting power to survive these attacks and have them from time to time. It is possible she may have an erysipeloid acute fulminating lupus erythematosus of the Kaposi type, from which she recovers. I do not know that any such cases have been reported, but the last case I had, if I had not treated the patient for lupus erythematosus, I would have thought it was acute erysipelas.

DR. WHITEHOUSE: The fact that one cannot reconcile himself to the presence of a true erysipelas recurring for a period of seventeen years, led me to incline to associate it with the tuberculous process, not in the way that Dr. Schamberg expressed it as a lupus erythematosus, but as a tuberculous focus lighting up from time to time, and with that tuberculous lighting up process there would likely be high fever and considerable heat lasting as long as it did, which would confirm the view that it was tuberculous in nature and therefore connected in some way with the necrotic tuberculid and bone tuberculosis which this patient presented. I am inclined to think that they are associated.

URTICARIA PIGMENTOSA? Presented by DR. BECHET.

R. S., a woman, aged 31, was previously presented before the Society, with the same diagnosis. At that time, there was considerable dissent from the diagnosis; arsenical pigmentation or tinea versicolor were offered as possible suggestions. Since then, repeated scrapings for tinea had proved negative. Careful questioning had elicited the fact that no drugs had been taken, and a biopsy had shown a perivascular infiltration of lymphocytes and connective tissue cells, some mast cells, and cells containing yellow granules.

DISCUSSION

DR. WEIDMAN: It seems to me that the disease is extremely superficial for urticaria pigmentosa, and from what Dr. Bechet says of the histologic report, it is not entirely convincing. In a number of different dermatoses one can find mast cells, particularly around the blood vessels, and unless we find that they were responsible for the clinical tumefaction, however great that may be, the histologic evidence is not very strong in bolstering up a diagnosis of urticaria pigmentosa. Clinically, it impresses me as being very superficial for urticaria pigmentosa.

DR. HIGHMAN: I agree substantially with what Dr. Weidman said. It is easy to rule out tinea versicolor, and that having been ruled out we are dealing with a pigmentary disease and we must consider its nature. Is it a toxic eruption that leads to pigmentation, or is it in the urticaria group, or is it a parapsoriasis? In the last event, we would expect somewhat more scaling. That narrows the matter down to some toxic eruption leading to pigmentation, or urticaria pigmentosa. What Dr. Weidman said about the presence of mast cells is true. They are not necessarily pathognomonic of urticaria pigmentosa, and yet despite their sparseness in this case, we must by exclusion accept the diagnosis of urticaria pigmentosa. I can think of nothing better to offer, irrespective of the histologic findings.

DR. FRASER: When the case was presented before the Society two meetings ago, I took the ground that the evidence in support of the diagnosis of urticaria pigmentosa was not conclusive. With regard to the presence of mast cells in the tissues, I share the views of Drs. Highman and Weidman. Mast cells are found even in large numbers in other dermatoses. In a case of arsenical keratosis under present investigation, the cellular infiltration in the corium is made up largely of mast cells. The pigmented macules in Dr. Bechet's case may well be the expression of resolution in lesions not related to urticaria pigmentosa.

DR. HOWARD FOX: I still have the same opinion previously expressed that this is not a case of urticaria pigmentosa. It seems that the evidence, both histologic and clinical, is not sufficient to warrant that diagnosis. I consider it a pigmentation following some inflammatory condition, as suggested by Dr. Highman.

DR. SCHAMBERG: I do not believe that this case is one of urticaria pigmentosa. While there are some macular pigmented areas, there are extensive confluent patches of pigment around the waist. The patient says that she has been married for a number of years, is childless, and suffers severely at the time of her menses. Enlargement of any abdominal viscus might readily bring on a pigmentation of this kind. I believe the condition is a pigmentation of the body of systemic origin.

DR. WHITEHOUSE: I am inclined to agree with Dr. Highman and Dr. Fox. The pigmented areas are too diffuse for urticaria pigmentosa the clinical features are different, and I think the histologic examination is not satisfactory. The history has been elicited that the patient suffers from a chronic urticaria, which would show that she has something allied to that group; it may have been erythema multiforme. I think it is a pigmentation following an inflammatory lesion of the skin of toxic origin.

DR. LANE: I am not convinced that this is a case of urticaria pigmentosa; in fact, it seems to me that the only point in which it resembles that disease is in the pigmentation. The massed lesions are not characteristic of it; the lesions are not distributed as they ordinarily are in that disease; there is practically no urticaria and only slight redness caused by rubbing the lesions. With the histologic examination showing only a moderate number of mast cells, there are none of the other characteristic features of urticaria pigmentosa.

DR. HIGHMAN: One of the strongest points against the diagnosis is that it is a disease of childhood and it ought to disappear spontaneously at about the age of this person. That should be given consideration, but whether it should be given more weight in the present case or not, I do not know. A second point is that connected with our fetichism as to mast cells in connection with urticaria pigmentosa. It seems to me that every one here has forgotten a paper read by Dr. Hartzell in 1817 regarding the relationship of mast cells to urticaria pigmentosa. It would be well to refresh our memories in regard to his findings and conclusions.

DR. WISE: I am inclined to accept the diagnosis of urticaria pigmentosa.

DR. BECHET: There are recorded cases in the literature of urticaria pigmentosa beginning in adult life. I agree with Dr. Wise that these lesions are not typical, yet the patient gives a history of chronic urticaria, she has a marked dermographism, the pigmented areas become red on rubbing, and some of them are raised by friction. The microscope demonstrated the presence of mast cells. With this evidence in hand, I do not see what other diagnosis can be made.

PSORIASIS. Presented by DR. WISE.

D. H., a colored boy, aged 12, came to the Vanderbilt clinic on Jan. 12, 1926. The palms were practically a solid plaque of scaling, with marked fissuring, and there were outlying satellite and larger spots. The fingers also were involved. The soles presented a similar condition, extending up on the sides of the feet. There were also isolated pea-sized and larger confluent patches on the knees, with an occasional small patch on the trunk. The finger and toe nails were transversely ridged, stippled and thickened. The tips of some of the fingers were fissured, some extending up to the free edge of the nail. The patient also presented marked inguinal and cervical adenopathy. A Wassermann test taken a month previously was negative.

DISCUSSION

DR. SCHAMBERG: Psoriasis in colored persons is rare. I have seen many patients with psoriasis but have never seen it in a full blooded black; this patient has some white blood in him, which may account for the exception to the rule.

DR. HOWARD FOX: I agree with Dr. Schamberg that psoriasis in a full blooded negro is rare. It is not so rare, however, in those with a mixture of white blood. I have photographs of three cases of undoubted psoriasis in full blooded negroes. In one at least, a histologic examination was made.

DR. FRASER: There is a case of psoriasis in a full blooded negro reported in the current issue (January, 1926) of the ARCHIVES OF DERMATOLOGY AND SYPHILOLOGY.

DERMATITIS MEDICAMENTOSA (IODIDES)? Presented by DR. WISE.

O. D., aged 40, came to the Vanderbilt Clinic on Jan. 18, 1926. He denied all venereal diseases and gave a history of having taken acetanilid for the relief of headaches during the past year. He also took medicine for high blood pressure over a period of three months. The patient presented over the frontal region of the scalp and forehead a severe eruption of pustules, some crushed and some grouped together in patches. Over the face were papules and pustules, especially numerous over the middle portion. The ears were dark red and presented a few pustular lesions on the rim. The mucous membranes were free from any eruption. In the cubital space of the right arm were a few fading pea-sized pustules. The duration of the condition was two months. The patient had had a negative Wassermann test made by a private physician. Another Wassermann test had been made and a biopsy, but the reports had not been received.

NOTE.—The subsequent microscopic examination of one of the papular lesions revealed the structure of tuberculosis, establishing the diagnosis of lupus follicularis disseminatus facei of Tilbury Fox.

DISCUSSION

DR. BECHET: The lesions on the face strongly resemble an iodide acne, but the large crusted lesion on the forehead does not conform to that diagnosis. I am interested in hearing the opinion of those present as to its identity.

DR. WEIDMAN: It resembles an iodide eruption more than anything else, but it is easy to determine whether the patient has been taking iodides with the ordinary starch test of the urine, which can be made in three or four

minutes. Dermatologists do not avail themselves of that and the bromide test as often as they should.

DR. MALONEY: I thought it was an iodide rash, but some of the lesions on the face resembled acnitis, though differing from it in being less pearly and shiny. The scarring on the scalp seemed to be marked, and though I cannot reconcile that with an iodide eruption, I still think this is a case of iodide eruption.

DR. HOWARD FOX: If there were a clear history of ingestion of iodides or bromides in this case no one would, I think, hesitate a moment about the diagnosis. Even without such a history, I think that is the probable diagnosis. I would be glad if Dr. Weidman would state for what length of time iodine can be detected in the urine after the discontinuance of the drug.

DR. WEIDMAN: I cannot say exactly for how many months, but it is retained in the tissues for a long time after the ingestion of the iodide. I can vouch for it up to six weeks.

DR. WHITEHOUSE: It impressed me as an iodide eruption. They are localized many times.

DR. LANE: I do not think that scarring is against the diagnosis of iodermide. Large destructive iodide or bromide lesions leave some scarring.

DR. SCHAMBERG: I believe that acnitis can be excluded on the basis of the absence in the facial lesions of the peculiar pearly translucence to which Dr. Maloney referred. I do not think that clinically we can always distinguish between eruptions of iodides and bromides; they often produce the same type of lesions. We often see a bleb become purulent and a vegetating lesion develop from the base; the ulceration might account for the scarring of the scalp. I think it is a case strongly suggestive of a halogen eruption.

DR. WISE: I will report the bacteriologic findings at the next meeting.

A CASE FOR DIAGNOSIS: LUPUS ERYTHEMATOSUS (?) TERTIARY SYPHILIS (?). Presented by DR. WISE.

A. D., a colored man, aged 40, born in the British West Indies, came to the Vanderbilt Clinic on Jan. 20, 1926, with a condition of three months' duration. In front of the ear was a small patch 1 by 1½ inches; on the right side of the upper lip was a dime-sized patch, slightly irregular, with finely grouped papules slightly erythematous and with a few fine scales. Beneath the right nostril was a smaller patch. The mucous membranes were not involved. The patient gave no history of syphilis. He had had gonorrhea two years previously.

DISCUSSION

DR. SCHAMBERG: On account of the segmented, slightly infiltrated edge I have received the impression that the case is one of tertiary syphilis.

DR. WEIDMAN: I also thought it was tertiary syphilis. It did not have the dull dusky red appearance usually seen in lupus erythematosus.

DR. LANE: My impression is that it is syphilis.

A CASE FOR DIAGNOSIS: LUPUS ERYTHEMATOSUS OR LUPUS VULGARIS ERYTHEMATOIDES. Presented by DR. BECHET.

J. M., a colored man, aged 29, from Dr. Aitken's service, said that the lesions had been present for seventeen months. They consisted of deeply scarred,

crusted, dry, sharply marginated lesions on the scalp, face, ears and lower lip. The lesions on the scalp were so deeply scarred as to be almost crateriform in appearance. A lesion on the right cheek was deeply scarred and reticulated, with a verrucous surface. The lesions on the ear were scaly with hypertrophic prominent follicular openings. There was a marked enlargement of the lymph nodes back of the right ear. The Wassermann reaction was negative. A physical examination revealed a systolic murmur. The lungs were negative, despite a history of night sweats and a loss of 15 pounds (6.8 Kg.) within the year.

DISCUSSION

DR. WHITEHOUSE: It impressed me as a case of lupus erythematosus. There is a possibility that there is a lupus erythematous base to the lesion on the lip. Whether a simple superinfection is developing or malignancy, I do not know. I think it is a different process from the other.

DR. HIGHMAN: A histologic study might show whether the structure is tuberculous or not.

DR. WEIDMAN: The left ear would help out a lot. The infiltration at the rim was not of the tumid kind one sees in a lupus vulgaris, and the comedones in the shell of the ear would prejudice one in favor of lupus erythematosus.

DR. HIGHMAN: The point brought out by Dr. Weidman is a very good one.

DR. WISE: I think it is lupus erythematosus.

DR. BECHET: The lesion on the left ear is typical of lupus erythematosus. The other lesions also strongly resemble those of that disease. The only doubtful points are the unusually deep scarring on the scalp and the pitlike scarring of the lesion on the right cheek. These lesions, however, are not sufficiently atypical to cast a doubt on the diagnosis of lupus erythematosus.

GROUPED COMEDONES. Presented by DR. BECHET.

The patient, a little boy, was presented at a previous meeting of the Society with a diagnosis of grouped comedones as described by Crocker. All the members had disagreed with that diagnosis and thought it was lupus vulgaris. The child was presented again before he had entirely recovered after the use of a boric acid salve and lotio alba and then showed the reticulated scarring occasionally observed after a healed acne. During the two months that he had been under observation some of the comedones had been expressed, others had exfoliated, and the sebaceous abscesses had practically healed.

DISCUSSION

DR. HIGHMAN: When I saw the patient last I thought it was a case of lupus vulgaris, not acne. It still does not look like acne but like lupus erythematosus. I do not know what this condition of Crocker's is that Dr. Bechet refers to; he says it is some type of acne. I think you will have to bear in mind that it is related to the condition described by Dr. MacKee some years ago as ulerythema reticulatum; in some respects it also suggests ulerythema ophryogenes or one of the essential atrophies of the skin. Clinically, however, it seems to me that the most likely diagnosis is lupus erythematosus.

DR. WEIDMAN: I had thought of ulerythema sycosiform, but was deterred from sponsoring that diagnosis when Dr. Lane pointed out that the case was not occurring in the adult. I have always doubted the descriptive value of the term for this condition; I have seen two or three cases like this in girls, which seemed

more or less like a low-grade pyogenic condition. I can understand why the boy still has an infiltration on the cheek although the comedones have disappeared; thus, in sections of acne vulgaris papules from the back I have seen fragments of hairs which had not been evacuated and around which there was a foreign body granulomatous development. The remnants of hairs in this child could account for the infiltration which still persists.

DR. FRASER: My experience in these cases confirms what Dr. Weidman has said.

DR. SCHAMBERG: The patient exhibits a decided degree of punctate scarring at the site of previous comedones in the circumscribed patch on the face, and also a suggestion of neighboring atrophic scarring. There is also some telangiectasis and a slight reddish infiltration which somewhat resembles lupus erythematosus. Unna created the group of "ulerythema." You will recall that he gave to lupus erythematosus the name of "ulerythema centrifugum." He also described a condition which he called "ulerythema acneiform." His patient presented comedones, acne papules and a peculiar scarring. The absence of nodules under the pressure of a diascope indicates that this case is not lupus vulgaris.

DR. BECHET: In the few cases of reticulated ulerythema I have seen the scars were over both cheeks and never localized as in the present case. When I first saw the boy two months ago he had a considerable number of grouped comedones, several of which I expressed. The skin between the comedones was neither scaly nor atrophic and seemed absolutely normal. The lower border of the lesion was boggy and seemed to consist of several deeply infected sebaceous glands, from which pus was expressed. There were several milia on the right cheek. Now the lesion is practically well after the application for some weeks of a boric acid salve and simple lotio alba. Under these circumstances the original diagnosis of grouped comedones as described by Crocker seems more accurate than the diagnosis of either lupus erythematosus or lupus vulgaris.

EXTENSIVE LICHENIFICATION DISAPPEARING AFTER REMOVAL OF GALLBLADDER. Presented by DR. HOWARD FOX.

Mrs. E. B., aged 54, was previously presented in October, 1923 (ARCH. DERMAT. & SYPH. **9**:494 [April] 1924), as having a case of lichenification. There was an extensive eruption of the forehead, neck, chest and upper extremities of unusual clinical appearance, some of which had been present for five or six years. Opinions at the time of presentation were divided, some considering the eruption lichen planus, others an unusual type of lichenification. A biologic examination showed simple inflammatory tissue, with no evidence of lichen planus. In response to a letter inquiring about her condition, the patient returned recently (January 9), at which time there was no trace of her former eruption. Following an operation on the gallbladder in October, 1924, the eruption had entirely cleared up within a month and had never returned. The gallbladder was septic and contained numerous stones. The following report of the operation was kindly given by the operator, Dr. Edgar K. Conrad:

"Mrs. B. had chronic cholecystitis for several years prior to her operation, Oct. 13, 1924. Three weeks before her operation she had a severe attack from from which she did not completely recover. The gallbladder was septic and contained numerous stones. The microscopic examination showed chronic productive inflammation. There were many adhesions around the gallbladder.

Following this operation she was well for three or four months, and then symptoms began to return. Several attacks of jaundice followed which did not clear up. A second operation was performed July 7, 1925, at which time the stomach and duodenum were adherent to the anterior border and free surface of the liver. The adhesions were carefully separated down to the common duct, which was occluded by adhesions. The common duct was then incised and dilated to receive a no. 12 catheter. The duodenum was punctured, and the free end of the catheter was inserted to 6 or 8 inches (15.2 to 20.3 cm.), and the duodenum sutured to the common duct. Since this operation Mrs. B. has been perfectly well, having passed the tube in due course. Her condition would suggest that the gallbladder acted as a focus of infection, causing the skin eruption."

DISCUSSION

DR. HIGHMAN: Three months ago I showed the case of a man with a provisional diagnosis of lichen planus. The eruption disappeared quickly. Dr. Goldenberg had thought it a small papular form of erythema multiforme. Three days after the patient was presented, the papules developed vesicles, and the eruption cleared up promptly, substantiating Dr. Goldenberg's views.

DR. WHITEHOUSE: In spite of what Dr. Fox said about the histology of the lesion, I think the sequence of events — the disappearance of the eruption following a gallbladder operation — proves that it was lichen planus. I have seen such cases which did not yield to any treatment until the patients were operated on for gallbladder conditions, and before they convalesced from the operation the eruption had disappeared.

DR. WEIDMAN: There is an alternative explanation of the cure in Dr. Fox's case — i. e., the profound shock that goes with surgical operations. The Germans are quoting a case of inoperable visceral cancer which cleared up completely following an overdose of morphine from which the patient almost died. The inference was that this profound constitutional upset was in some way related to the disappearance of the carcinoma. If the conclusion is a valid one, it shows the extent to which constitutional shocks may operate — not even short of cancer.

Book Review

QUESTIONS ACTUELLES DE SYPHILIGRAPHIE. By CLEMENT SIMON. Price, 32 francs. Pp. 334. Paris: Amédée Legrand, 1926.

The volume comprises chapters covering the discussion of the plurality of *Spirochaeta pallida* and the relationship of trauma to syphilis, followed by seven chapters dealing with a series of researches by the author and his co-workers covering therapeutic and diagnostic problems, together with the description of what the author considers a syndrome not heretofore described, "azospermia with preservation of the secondary sexual characteristics." The evidence regarding the presence of syphilis in the two cases described is not convincing.

The text includes a bibliography of 2,400 titles selected from the literature of syphilis during the past two years, the titles being conveniently grouped under different headings.

The book is suitable only for those particularly interested in syphilis.

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